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## The Man Young at Fifty

### PERILS OF ADULTHOOD—CHIEFLY THOSE OF THE AUTUMN OF LIFE.

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The most hazardous occupation, so it is said, is being a baby. A popular impression obtains that when one "puts away such childish things" as difficulties in remaining alive, then one is safe until the shadows begin to lengthen and the evil days come toward the "period of slowest decline," bringing inevitable weakness and the final release. The fact is, each developmental period supplies perils of its own, most of our own making, too. What are these stumbling blocks and how can we steer clear of them?

By all means let us face the grim actualities and aim to display that strategy, the need of which has of late been so brutally forced on attention. Let us pay all adversaries the compliment of ordinating their powers and resources, at the same time giving closer heed to our own.

Here is a duty agreeable enough, also a binding obligation which, if ignored, limits the continued enjoyment of blessings every one possesses whether they realize them or not. All that is necessary is a serene yet critical vigilance along with faithfulness to one's personal interests. The price is small; the rewards magnificent.

Perils, by the way, are either positive or negative; those deserved and those thrust upon us. Some we can elude by subtlety, some by the simple process of being elsewhere at critical moments.

Mankind is standing on the threshold of the great sociologic awakening. No effort should be slurred in estimating our assets and liabilities in a world gone mad. The only hope for survival is a clear fore-sightedness. Are we, you and I, qualified to stand the increasingly complex and crowding strains?

Men and women in their prime encounter numberless hazards although it is well within their capabilities to escape most of them. Every year life is lived there is added so much to experiences estimating them upon the basis of cost expended, and as influencing the product, ourselves. All of integrity is so well worth saving that we may profitably survey what those perils are likely to be which are commonly encountered, because

some impairment of constitutional vigor, in one form or another, must ensue.

You may say this is a gloomy, depressing outlook, to take a long view of such unlovely considerations. Bear in mind two adversaries always lie in wait; the one is decrepitude and the other death.

Perils of Adulthood assail at all times and at every turn. Few now exist compared with those to which primitive man was exposed when he lurked amid prehistoric mammoths, saw-toothed tigers and diverse feral monsters. Fear then, was the natural state. Terror bred caution, and later cunning; then judgment and strategies grew, which ultimately led to betterments in defense and survival resources and finally to coöperation, community action and the commonwealth.

The nature of those primitive perils was simple enough however huge and grimly picturesque they may have then appeared. They invaded almost solely from without.

Now two kinds of perils must be met, from without but chiefly from within, tissue changes, vital setbacks, degenerations, decadent energies, impaired life forces and survival values; all largely result from errors of living, (Kakosthenics) of one sort or other or degree. Our main reliance is on acquired wisdom; instinctive guidance becomes blurred. In civilization perils from field, flood or fire are comparatively rare. The penderables have faded into a drab grouping of imponderables. Our chief danger lies in being lulled into a false sense of security and in adopting as our credo the word of the song:

"Oh, do not wake me, let me dream again."

We may now profitably take account of stock and survey our assets. These consist of body defenses.

*Body Defenses.* Self regulatory mechanisms.

The body is supplied with a series of exquisitely adjusted mechanisms designed to so accumulate, distribute and regulate energy as to maintain that nicety of poise, which constitutes health. Body defenses are the chiefest of human possessions. They are so perfect in their working as to give no sign, hence they get the smallest attention, and only when things go wrong; as disharmonies arise. Then curiously enough, a feeling of resentment is likely to occur, the idea obtruding that some embodiment of guiding power is not attending to its business.



So long as these defense reactions are kept in working order life proceeds serenely and normally. They are subject to diversified and manifold disturbances occurring within due bounds or variants, and can be induced automatically to swing back to equilibrium and no harm done.

When one or other form of over-stimulation goes a little too far, there is disorder in the rhythm, hence in the tissue cells and juices which results in pronounced disarrangements, most of which, even when disease arises are still capable of readjustments, restitution, even cure.

This rehabilitation comes about through reinforcing the body defenses by expert use of conscious control. This self-mastery goes a long way, but only along divinely ordained lines of economies in conduct.

If, or when, the disarrangement reaches such a degree that a considerable group of cells are gravely impaired, or the juices, fluids, secretions undergo harmful change or vitiation, then the structures of which these cells are component parts become seriously altered; repair values are overwhelmed and danger or permanent damage results.

We may speak of these as scars; permanent damage spots, leaving their limiting effects on structure and function.

Plastic lymph is frequently poured out and around delicate structures, making defensive walls for some parts of important life organs; and although organic disease does remain, the organism as a whole survives the life proceeds. Neighboring structures not so seriously damaged recover; take on extra duty and supply compensation.

The fact it is your personal business to take account of stock once in so often; also to learn the rules of the game and to play fair. Perils to stability, so easily disturbed or impaired and so difficult to rehabilitate are unceasing. It is worth while to get a fair idea what these body defenses are, how they tend to get out of gear and at least to make some effort to know where one's perils lie, to estimate what they are and to form plans for avoiding the worst of them.

It is not a question of getting discouraged, or in a useless funk. Of course, you don't relish the idea of brooding on disasters. You prefer to be an exemplar of sanity, of serenity, of cheeriness. The temptation is to boldly assert "who cares"? "Let us eat, drink, and be merry withal." Yet that is not the way you run your business. Of a truth your most important enterprise is the conservation of your own welfare.

Each human body is a generator of energy, some more some less. A normal organism, or one not markedly subnormal, is capable under favorable circumstances, of generating vastly more energy than is ever utilized.

Mental energy and bodily energy is the same in essence, and is so intimately blended, fused, integrated and correlated that we may regard them as one with variations in manifestations only.

The problems of life, of behavior and of compensation have to do with harmonious actions and interactions of the transmission, transformation and application of this abundant energy. Vital dynamics resemble so closely electrical energy we may use our knowledge of electricity as illustration.

The normal person or individual acquires habits of energizing which suffice to maintain posture, poise and product. Innumerable influences arise to disturb this equilibrium and to induce prodigalities or inadequacies which in turn mar not only the product, the qualities,

but also the make up (mechanism), the human organism, body and mind as a whole, hence the attributes which, in their entirety we call health, sanity, competency.

Some persons are so well poised they not only keep themselves in safety and usefulness but can, and do, guide and control others. Every parent should be able to supply every child with guidance sufficient for teaching conscious control so long as that child remains dependent upon the parent (biologically). If all parents did so, there would be few social or domestic disasters. The fact is few can, or do, act as safe guides; hence there arise others who assume the function of expert.

Originally the priest or chief, or superior men as they grew in wisdom, made their contributions in guiding the group or gens. Now it has been found that only those can be depended on who devote their lives and energies to this particular domain of effort, hence we have physicians.

#### *Perils arising as the Meridian of Life nears or passes.*

The vulnerability of mature age is chiefly due to a decline in the body defenses. There are also accidents; "acts of Providence," but most hazards are due to deplorable folly or wrong doing, and are logically escapable. The directions these perils take may be pictured under three groupings not clearly separable; they fuse into each other or overlap.

(1) Alterations in cells, structures and functions which are merely mutations or stages of normal decline; retrogressions to be expected and accepted, capable however of conservative modification. Meliorations are possible and in many particulars and in some degrees, so much so that health and vigor can be maintained on an even plane for many years.

Among these cellular mutations some arise earlier than others, especially in the more delicate structures; notably impairments of perceptions and of sense organs, such as failing of sight, of hearing, of taste, of smell and of the complex nicities of touch conveyed by skin surfaces and mucous membranes. Also sensory perception in deeper structures lessens, including the various muscle senses, and the general sensation, vague awareness (coenesthesia). Pain arising in the mature person is relatively less acute and is better borne than by the young. Fatigue distresses, on the other hand are more destructive to the over mature.

In each one there occurs a reproductive epoch which develops, becomes perfected and subsides. The change of life in woman is inevitable, (menopause); a graphic episode which appears at a relatively uniform time.

In the male this phase is paralleled by a climacteric, but unclearly and not inevitably. Retrograde changes occur in all the noble organs in varying degrees and in accord with diversities due to many factors. Among the chief of these is hereditary stamina, "strength of constitution," survival co-efficients; likewise these are influenced by diversities in surroundings, mutations in environmental conditions and due to vagaries of behavior, in methods of feeding and living. These cannot be altogether safeguarded.

Retrogression changes of advancing years show most noticeably in the organs of generation and genito-urination, especially those related to the "critical" epoch referred to, in particular the ovaries, and uterus in the woman and the testicles, the prostate, the bladder in man.

Cancer is a disease of middle life whose origin still is far from clearly understood, nor is it known to be preventable. When recognized in its incipience it may be entirely curable.



Retrogradations thus sketched out involve the mind and governing centers and are manifested during late age by loss of poise between purpose and execution; by disharmonies among impulses and performances (voluntariness and volitional rhythms), by waning of conscious control, and by fluctuations of self mastery. "To its own impulse every creature stirs" and joy is in the doing, pain in the repression.

Among the domains or forms in which loss of poise is displayed are in the choice and amount of food, in diet, in perversions of taste, in false cravings as for narcotics (delirifacients), for drink, and tobacco, also in the use of tissue conservators such as coffee and tea which, when abused, simulate poisons.

Normal life is the married state, wherein a higher degree of health can be maintained; hence problems arise of comparative mortality in the single and the connubially supplied.

Increased susceptibilities occur to sudden changes, to excitement, to fatigue, to overstimulation of any kind from both natural, normal and from abnormal conditions or circumstances of every day existence, "the life of relationships." Happenings which should be avoided so far as possible are: Shocks, irritations, to sudden and distressing extreme alternations in temperature, in dryness, or humidity; exposure to blustering winds or to protracted calm and to dust; also to avoidable nervous strains, to emotional variations or debauches of feelings, indulgences in sensualities, in grief, in worries. Both overdoing, and underdoing are hurtful; the one leads to destruction, the other to degeneration.

Digestive competence may exceed food disposal, and corpulency burdens; or it may be that one's susceptibilities alter to certain articles of food. This occurs at different times and under varying circumstances (anaphylaxis) in the same individual, so much as to produce self poisoning and organic deterioration. Excess in certain foods is the cause of some of the more destructive degenerations.

The heart, blood vessels and kidneys alter in structure and in resisting powers. This depends largely on the nature of foods taken, or one may say morbid impressionabilities develop to one or other food.

Respiratory susceptibilities, also deficiencies occur; the resisting power of the surface of the upper air passages lessens. Pneumonia is the chief infective peril of the aged, partly because of this failure of respiratory competence and partly because body defensiveness (immunity) to this infective agency subsides.

(2) *Conditions which need not always, but so constantly do occur, that they must be reckoned as among the Developmental Deteriorations.*

While pursuing the even tenor of a practically blameless existence; while behaving in fashions which by habit, custom and common consent are to be regarded as normal, oftentimes cellular deteriorations begin insidiously, unrecognizably, and readily pass into destructive alterations of organic structure. These are however, mercifully capable of being prevented, postponed, limited or more or less repaired, but not cured, *i. e.*, when once the abnormal states are initiated they may yet be brought back nearly to normal action by vigilance and consistent conduct.

Among the first of these transition states (as we may call them graphically) arise in the heart, blood vessels and kidney group of cell perversions; not precisely the kind referred to above but another type of deteriorations mainly due, so far as is known, persistent errors of diet or to alterations in susceptibilities to foodstuffs

or diminution in power to completely reduce the by-products of food and body formed waste products to forms capable of ready elimination, or to both. We seem, fortunately, to be nearing a solution of many problems involved; enough to greatly enhance protection from degenerative perils in the circulatory (cardio-vascular renal) group of organs.

Associated with circulatory retrogressions are such phenomena as heart tire, heart insufficiencies, (ebbing energies) muscle weaknesses, disorders in the complex group of functions such as of rhythm, of nervous equilibrium. Upon the integrity of circulatory defenses thus shown to be under suspicion, much of life expectation depends.

Underlying and conditioning all vital processes lies the status of those blood glands so recently come into the foreground of attention, the ductless glands with their "internal secretions." These are now shown to constitute the essential regulators of body defenses, of tissue respiration, (oxygenation), the maintenance of the body fires, of the draught in the human furnace.

Among the blood (Hemadogenic) glands "the great triad" is that of the Thyroid, the Pituitary, and the Adrenals. Associated are others, the Pancreas, the Ovaries, Testicles. Evidences of depreciation of circulatory equilibrium are of the deepest significance. While it may be commendable to disregard danger signals it is by no means safe. That master in medical science, Sir James MacKenzie says:

"The investigation of the early stages of heart affections has not yet been seriously undertaken. The patient's sensations must be studied while they are present, and all associated phenomena carefully noted. When heart failure sets in the earliest manifestation is always a subjective sensation of a disagreeable kind. Symptoms are produced in three different ways, according as they modify the structures of the organ, or its functions or call into play its protective mechanisms."

Hence there is only one safe course: consult a competent physician on the least occasion and he will more often reassure than warn.

Among the pronounced phenomena of circulatory disturbance in Maturity are: Vertigo, Angina Pectoris, Variations in Blood Pressure. So closely associated with them is kidney disease it is also imperative, mandatory, to have examinations of urine (urinalyses) made at least several times a year.

Correlated with the problems of transition states of normal decline, are those involving the digestive organs; not only those commonly suffered such as acid fermenting stomach or slow digestion, constipation and the like, but others much more significant. Persistence of digestive discomforts unrelieved by rational means, leads to suspicion of graver states, such as ulcer of the stomach or duodenum, leading to peril from hemorrhage. Also they may indicate progress of kidney disease, or of cancer. The gall bladder is subject to diseases often most obscure, again agonizingly painful. For example, when gall stones long unnoticed wake up or pass into out-going channels there is that cruel pain or "colic." The pancreas is subject to serious involvement usually most obscure.

Sugar in the urine may mean little or much, but demands exploration till its nature is revealed, as a mere digestive disturbance or it may be true Diabetes. An interesting point is coming in for attention, that nearly always potential Diabetics consume an excess of sugar—certainly more than they can use up safely.

The subject of disordered body chemistry is one which has much to do with saving or losing life. The

term "metabolism" is now glibly used and it might be as well to explain that it includes the whole series of processes, vital and chemical, which occur from intake of food to extrusion of body formed poisonous wastes.

Among disorders of metabolism is that "protean" one goutiness, which only in rare instances is "gout," an acute disease. It is a disturbed state of body chemistry wherein the poisonous wastes are retained long enough to produce a vast variety of nervous and nutritional disorders. Gouty states also form the basis of a much larger group of diseases when complicated by the effects of infection, of exhaustion, of shocks physical and mental.

Gouty conditions are both acute and yet mostly sub-acute or chronic; some are also mild but obstinate and others severe but less significant. The milder forms persist and may annoy for years. Often the chief reason they don't disappear or "yield to treatment" is that the constitution is somehow at fault; does not possess enough original energy to regulate itself, or to react defensively to stimuli, no matter how excellent are the means employed for bringing about readjustment, compensation and restitution.

Note the familiar group of so-called "rheumatic pains or states," "arthritis" or joint miseries in which rheumatism *per se* (a rare and febrile or inflammatory disease) has no more to do than to form the complex common ground work. The phenomena of pain, ache or tenderness may appear in almost any tissue, structure or mechanism of the body, conspicuously in the muscles, joints or skin. "Miseries in the bones," usually at the junction of muscle and fibrous structures are not rheumatism, nor are they gout, but close kin to both and difficult to explain. They are due in late maturity to shrinkage in the muscle masses, hence to pinching of sensory nerve threads.

At about middle age diseases of obscure origin arise affecting the sense organs, the eye, such as cataract or glaucoma.

Also the ear falls into evil ways as by long continued catarrhal states along with fibrous and bony changes which result in hardening (otosclerosis), closely connected with this are various disorders of the respiratory tract; likewise marked derangements in other mucous membranes occur.

Among the digestive disorders are: susceptibilities to distresses produced by particular foods, "nervous dyspepsia," chronic appendicitis, colonic and intestinal disorders, adhesions, kinks, visceral stasis and too much acid (hyperchlorhydria) or too little (achlorhydria).

Infectious diseases are rare in the mature, but to some of them peculiar liabilities are shown, e. g., pneumonia. When, as rarely happens, an older person "takes" whooping cough or measles "they go hard" with them.

We may mention finally, in the long but by no means completed list, the weaknesses, the asthenias, the nerve force inadequacies (neurasthenias), mental bewilderments (psychopathies), disorders of nervous control (neuroses), shown in those whose energy supply (content) is originally low, or it may be only moderate, whence they more readily become affected by a multitude of collateral or contributory agencies. The result is some manifestation of weakness or disorder.

Energy values are, in some individuals, often low at first, but may increase by good care or good luck. In others they may seem high enough but suddenly run out, become exhausted, leaving the individual depleted, or fallen into one or other state of exhaustion incapable of satisfactory repair. This subject of asthenia

while understood well enough by the medical expert cannot or will not be appreciated by the laity. The physician may recognize and warn but the victim refuses to be guided or coerced sufficiently to escape what soon or late becomes a humiliating decrepitude. Some gains can be secured but exhaustions too often have become established in excess of the reserves; hence relative emptiness of vigor.

(3) *Morbid states due to lessened energies, to failing vigor or to recuperative incapacities.*

Lowered resisting powers render one liable to premature old age changes; to various disorders, diseases and decrepitudes more or less serious or disabling. By God's mercy most of these need not occur by the exercise of reasonable common sense and good expert aid.

In addition to the altered conditions enumerated, induced by over-maturity, are characteristic ones displayed chiefly on the gross framework, the bones, muscles, connecting structures, pulleys, joints and the like static and motor mechanisms. These changes in structure and function are in the nature of shrinkage in muscle fibers; in the replacement of muscle cells by connective tissue (similar to scars); in bones, by the substitution of brittle material, of earthy and mineral salts making for rigidity, of loss of tone, of pliability, of litheness in the smooth, beautiful fibrous structures. While these stubborn changes are inexorable, good care can yet effect something and that something is worth effort not so much to prolong life, as to fend from the chagrin of decrepitudes.

Thus one is liable to become less handy, less deft or precise, in the sweep, amplitude and scope of movements. The particular peril here consists in hindering reaction times, of inducing slowness and impaired exactness in step and swing of the legs; hence one is less able to escape approaching dangers, as in a crowded thoroughfare, among pitfalls, obstructions, precipices. One may even tumble on the home stairway, hence dangers from bruises, breaks and concussions. So much of this peril is due to apathy and disuse, it is obvious they should be made plain and combatted.

Breathing power (respiratory capacity), as has been said, becomes lowered in late maturity, hence the body drafts are reduced, oxygen interchanges grow less and dim the lights and chill the fires. As part of these slowing down processes there forges to the front the grim menace of chronic disease. It can be, and often is, escaped, however.

Whatever joints have started in one's harness of defense they thus become more widely opened; one is left naked to thrusts from without. Pains characteristic of aging structures, called "rheumatism" or "gout," are polite terms and used by the medical adviser to soften the blow.

The muscle pains of late maturity are due, as has been said, to pinchings of sensory nerve terminals from connective (scar) tissue rigidities. The joint structures atrophy and "creak" and, since they also supplied with sensory nerves, "they hurt," become "gnarled," knobby, unsightly as well as clumsy. One need not despair however, for much can still be done. The basket holding the bellows, the thorax, can still be trained to open and shut more completely, and this achievement alone often brightens the fires of life so that well being is still enjoyed.

That pesky "metabolism" now becomes a nuisance, a hindrance, and demands the combined solicitude and hopeful efforts of the medical expert along with cordial co-operation on part of the victims.



## VEGETARIAN DIETETICS.

### Its Scientific Aspects as a Conservation of Middle Aged Man-Power.

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Vegetarianism is a subject of immense importance to the health of a nation, and upon which little has been written and published of late in our journals and magazines, although the subject is as old as the hills. We find it discussed in the essays written by Plutarch. We find it discussed by the Romans. Seneca, who had slowly adopted vegetarianism, writes: "Struck by such arguments, I also have given up the use of flesh of animals, and at the end of a year my new habits have become not only easy to me, but delicious; and it even seems to me that my intellectual aptitudes have been more and more developed." The religion of the ancient Egyptians also forbade the use of meat, and the original religion of India even to this day forbids its use. More than 2,500 years ago Lord Buddha emphasized the importance of vegetarianism. The same was taught by Pythagoras when he said:

"Take not away the life you cannot give,  
For all things have an equal right to live."

Although vegetarianism is an important subject in that it argues for pure food and, therefore, for pure living, it has excited too little interest among the medical profession and still less among the laity. I do not know the reason for this, except that it may be due to the general prejudice that exists toward a vegetarian, and to the fact that no one believes it possible to exist, and much less to do hard work, while living on such a diet. This idea seems to arise from faulty education and the fact that this country is known as a meat eating country.

While some people will admit that one can live and live well without meat, they never care to take the step to do so. There seems to be too much of a craving for meat. People argue that meat dishes are tasty. While I would not deny this, it is also a fact that many will eat only certain meats, giving as a reason that the other meats are abhorrent to them. Others refuse to eat certain meats because the animal or bird from which they are derived subsist on distasteful food. So we see that when we come down to facts their practice is due to their peculiar psychology. If some of these meats were given them, and their source kept secret, they would, if the dishes were well prepared, eat them with relish. These reasons are therefore all unscientific. On the other hand, these same people dislike many vegetable dishes. This is because the food is not properly prepared, most of the time and energy being directed to preparing good meat dishes.

As to the argument that it is impossible to live on a vegetarian diet because of the large amount that has to be eaten to get the desired nutriment one person ate an abundance of greens, and then remarked on the large amount he had to eat and the rapidity with which his stomach emptied and called for more. The only answer for such an objection is to reply that he does not even know the elementary principles of feeding. Some persons contend that in Europe many years ago they had practically no meat to eat, yet did much harder work, but today they will not admit that the same can be done. Another argues that vegetarians are a weak, dried-up, hungry-looking class. This person undoubtedly never saw a real vegetarian, and those he did see were so run down physically from excessive meat eating that they had to become vegetarians.

It seems to me that the craving some have for meat is almost as bad as the craving a dope fiend has for his medicine. For example, I once saw a child who had such a craving for meat after having licked a bone that he refused to eat unless he were given more meat. A certain caged bear would change his temperament with a change from vegetarian to animal food and become very ferocious. Some believe it necessary to eat meat in order to obtain a certain fighting temper. But is there any reason to show that we should everlastingly want to fight our neighbors? From time to time articles have appeared in the medical journals which touch upon this subject, and although they were very interesting, they never advocated the living of a vegetarian life as the result of their scientific findings.

In all text-books dealing with the treatment of disease, the total abstention from food and especially from meat, is advocated. If the question of feeding is so important in the treatment of disease, why not make it equally important in the prevention of disease, since it can be proved that it causes many disorders of health? Moreover, meat is a second-hand food. Why eat a second-hand food if a fresh first class food can be obtained and relished with better results? Why expose the human machine to all the diseases found in lower animals? In India, for instance, which is a vegetarian country of the highest rank, there is very little cancer and appendicitis. These people contend that we have so much of these diseases because of the large quantity of meat we eat, and who can deny it? They may be right, even though the source of cancer has not been proven.

In our day, the cult of vegetarianism has found many a scientist to advocate its merit. Professor Hutchards says: "Animal food which we use or abuse is not food but continuous poisoning." The very fact that many sanitariums have sprung up of late that are advocating a fleshless diet, is a proof positive that meat eating is a source of disease. Vegetarian diet is a rule in these institutions, and they have cured many chronic ailments. The tendency of the medical profession has been and is gradually growing more and more pronounced against animal food. Gautier says: "Vegetarian diet seems better adapted than the ordinary, and especially the exaggerated meat-diet, for endurance. It helps to a cleaner and quieter mind. It is a healthy diet. It helps us to become more peace-loving and less aggressive, violent or neurasthenic. It is practical enough. It can be rationally accepted and advocated by those who pursue the ideal of developing and educating of peaceful, intelligent and artistic citizens."

In order to give a clear understanding of the correct idea of vegetarianism as it should be practiced from a scientific point of view, and which will provide all the necessary nutritive elements for the body, I will define it as a diet excluding meat, eggs and fish, but including vegetables, cereals, fruits, nuts and milk. As to what is and what is not scientific we need only refer to the nutritive elementary requirements of the body and the proportions demanded. Some dieticians, in discussing vegetarianism, include eggs in their diet. Eggs cannot be classified as anything but meat, because it is an animal product and consists mostly of protein. These same writers include fish in a vegetarian diet, their argument being that fish is fish and meat is meat; but they forget that fish is the name applied to the animal and not the product of the animal. If we were to follow their way we would, in asking for pork chops, have to ask for pig. Other persons exclude milk and butter from a vegetarian diet. There is also no reason for doing this, as it is a natural food of man and, moreover, no life need be taken to obtain it.



Humanitarianism is the first point in the cult of vegetarianism. All the great religious systems have advocated it. It is purity that we ask for, and not only as to our food, but also as to our conscience, for many a person refuses to kill his own chicken, but he is always ready to eat it. One great argument that is always given as an excuse for meat eating, is that if we did not kill these animals they would soon increase so rapidly as to exterminate the human race. These people evidently do not realize that most of these animals are force-bred in order to be slaughtered. Moreover, we do not need to slaughter our horses even though there may be more than enough, and they never would think of exterminating us.

Another argument against the necessity of killing is that a cow, for example, will give a greater return in the supply of milk in her life time than in the meat to be gotten from her. It should not be forgotten that there is no argument against the killing of an animal in self-defence. Love and destruction are the two great master-passions, and they are diametrically opposed to each other. But wherever an individual or a religious system is loving and compassionate, it has been lifted up and has drawn all nature and animate beings to itself. But do we really find evidences of loving natures? No; for under our pseudo-civilization there lies a foul and festering sore. For the sake of ministering to our depraved and natural appetites there exists a class of men whose daily work is to kill, and who pass all their years in shedding the blood of the innocent, and in superintending violent deaths. Away then with the slaughter houses. Think of a nobler ideal of life and of human destiny.

Encumbrance of the body with foreign materials is a prolific cause of many diseases and of cutting short the span of life, and where would one find such an excess of foreign material as is found in animal foods? A large number of deaths are caused by meat poisoning. It may be by eating the meat of diseased animals, by eating putrid meat or by sausage poisoning.

What if the complex paraphernalia of instruments and medicines were to be changed for the simple preaching of the perfect food; what if fresh air, exercise, cold water, warm clothing, sanitary houses, etc., were to be introduced, and total abstinence from alcohol, tobacco and stimulants became the recognized teachings, what if diseases began to be recognized as a crime and sickness a symbol of moral defect; what if hospitals and lunatic asylums were regarded as jails and prisons; what if sickness were the exception and overflowing vitality the rule; what if lustrous eyes, rosy cheeks, pearly teeth and strong set frames were the inheritance of us all, what an ideal society we should find!

Man is capable of infinite improvement. So closely coördinated in him are body, mind and soul that the life in one is dependent on the vigorous health of all. Not only the preservation of the body, but the cultivation of mind and soul should be the determining features in the selection of foods. "As a man soweth, that shall he also reap, and he that soweth to the flesh shall of the flesh reap corruption." Also: "As a man liveth, so shall he also think, for the paradise of perfection lies in our own hearts." If we desire to gain health and soundness of body, mind and soul, it is imperative that we avoid morbid appetites, excitants and stimulants and learn the simplicity of eating and drinking.

The apologists of animal food usually argue that God made everything for our use. They forget that medicinal plants exist side by side with the poisonous herbs.

Poisons have their uses, but it would be unjudicious to advocate that we should eat them because God made them for us. Men eat by habit; they are the slaves of custom; the prisoners of fashion. They scarcely care to know whether the ingredients they eat suit them or not, like the mill horse, they go round and round in the dull rut of eating and drinking.

A scientific diet is one to be found in the full and proper supply of the elements necessary for the building up of the physical body. There are five: 1. carbohydrates; 2. hydrocarbons, such as fats, oils, etc.; 3. nitrogenous compounds such as albumins, caseins, etc.; 4. mineral salts, and 5. water. It does not make much difference whence these substances are derived, if a person merely desires to live, but if a person wishes to live right and remain healthy it is necessary that he select pure food. This of course excludes meats as I have already stated. There are numerous scientific authorities who have written treatises to prove that those elements of food can be obtained from vegetarian foods. On the contrary, not a single scientist holds that men cannot live on fleshless foods, or that animal foods are indispensable to human life. Dr. Chittendon has made several experiments in this direction. He took three groups: 1. Five professors and instructors from a university; 2. thirteen men from the volunteers of the United States hospital corps; 3. eight students of different ages and temperaments. All these persons were put on vegetarian diet for a limited time. He found that they had a greater appreciation, a keener appetite, and a more thorough liking for food than before. He further reported that they did more work, led more active lives with greater comfort and less fatigue. Their health, he says, had certainly been of the best.

Gautier says: "Hindoo carriers of dispatches, who eat only rice, run every day, twenty leagues at least, and continue this for weeks. Russian farmers, who live only on vegetables, black bread and milk work sixteen to eighteen hours per day, and their strength is said to exceed that of American sailors. The miners of South America, very sober workmen, who do not eat meat, carry on their shoulders a weight of 200 pounds, with which they mount twelve times a day on an average, vertical ladders 60 to 80 metres high."

The advantages of vegetarianism are that, by this method of alimentation, the tendency to arthritic, gouty, rheumatic diathesis, or neurasthenia, disappears, the character becomes supple and the mind seems to enjoy more rest and acuteness. He further states that those nations which live mostly on a vegetarian diet are nearly always peaceful.

Carnivorous animals are generally fierce and dangerous, as lions, tigers, etc., while the herbivora, on the contrary are easy to live with and to domesticate, such as the horse and cow. A carnivorous regimen then certainly influences personality by making us more aggressive. Porphyre, the philosopher, says: "It is not amongst the eaters of simple and vegetable foods, but amongst the eaters of flesh that assassins, tyrants and thieves are met with."

People who eat a meal consisting of meat, bread and coffee are not eating a scientific meal. In the meat they get a large amount of protein, and a little fat if it has been fried, while in the bread they get their carbohydrate and in their coffee a cerebral stimulant and water. They are taking too much protein, which is uncalled for, and which acts as an irritant in the blood, and are getting none of the so-called vitamins which exist in fresh vegetables. Doctor Shastri in the intro-

duction to his book on Hindu Dietetics says: "With the growth of intelligence, people will undoubtedly look upon the problem of food from a different viewpoint. Now appetite directs, and reason obeys; then reason shall direct and appetites obey. It is better to punish our appetites than to be punished by them."

It has been demonstrated that animal cells can survive when they are separated from the living bodies, provided they be kept free from poisons and be given proper and adequate nutrition. It means that if we can understand the composition of cells, keep them in their healthy condition and provide them with the requisite material needed for their sustenance, we can prolong human life indefinitely. A diet free from unnecessary poisons can therefore also prolong the life of an individual and the vegetable kingdom gives us the widest range from which to select our foods according to our individual requirements. Therefore our difficulty lies not in the lack of food as much as in the selection of proper materials with which to fulfill our requirements.

Starches with acids produce very unhappy results when eaten at the same time. Especially is this the case with people who subsist on animal food. As soon as starchy food reaches the stomach, there is plenty of hydrochloric acid secreted for it and if, through vegetables or acid fruit, more acid is introduced, super-acidity becomes the rule. Super-acidity brings about fermentation. The stomach and intestines become inflamed and the irritation resulting lays the foundation of many diseases. Acids contain useful ingredients, but they should be used separately and preferably in the morning or in the afternoon or at least an hour before food is taken. Super-acidity should be overcome by regulating the diet and its combinations. Fermentation can be overcome with buttermilk.

A well built and smoothly working human organism can be kept in a state of high efficiency through the proper nourishment. Good structures can be strengthened by rigid abstinence, while a slight indiscretion can completely upset the delicately adjusted organism. All excesses in eating cause imperfect decomposition leading to irritations. The same is true of anything that is overdone. All deficiencies of elements on the other hand starve cell life.

Milk preparations, cheese and buttermilk should form essential parts of the food. A vegetarian relies very much upon these articles, as they take the place of meat. For children the best diet consists of whole wheat bread, butter, fresh fruit, nuts, milk and its by-products, and vegetables. These are admirably suited for the growing age. If food could be duly adjusted, all fears of child-birth and all needs for twilight sleep could be obviated. It is the getting away from natural living that causes most of these disorders. Child-birth should, for instance, be accompanied with very little pain; but it seems as if the suffering of child-birth is ever increasing. Food of course, is not the only cause, but a very important one. In women, who are subject to eclampsia, a vegetarian diet should prevent a recurrence of the trouble. Is this not then positive proof of the harm a meat diet can produce? Starches and sugar should be reduced to a minimum in child-birth. Oils and nuts, mineral salts and vegetables should be increased. Old people require very nourishing and sustaining food. The quality should be improved and the quantity decreased. Raisins, prunes, figs, dates and many kinds of nuts contain concentrated food values and should be used with almost every meal in some form or other.

Hindu Dietetics by Dr. Shastri contains some very valuable hints on how vegetables must be prepared in order that we may get all the required nourishment from them. For example, if a vegetarian were to cook spinach the way the ordinary house-wife does, he would get almost no food value therefrom. There is very little nourishment in spinach, but a very valuable salt of iron. If, therefore, the spinach is boiled and the water thrown away there is nothing of value left. The vegetarian therefore washes his spinach in water so that it becomes clean and then boils it in the water adhering to it. He then adds mixed spice and salt, chops it and fries it in butter. The dish therefore becomes nutritious. Potatoes are only washed and cut, but never peeled, so as to obtain the necessary salts the skin contains. The cellulose in the skin acts in overcoming constipation. Cream of wheat is made into a very appetizing dish by frying it in butter and adding sugar water, nuts and raisins.

Over and above all these facts, we owe it to our children, to society and ourselves that we take the best possible care of our God-given gifts for the preservation and development of our physical powers and mental faculties. We are sowing the seeds through our present actions for the future. We can make or mar our destiny. We can raise our monument or dig our own graves. Strong drink is becoming a thing of the past, chiefly because of the fact that it has been undermining the health of our nation. Opium has been doing the same thing for China. It is therefore up to us to live a more simple life and realize that this earth and the good in it are for our pleasure; and people will eventually understand what health and happiness really mean.

Schiller, the poet, has expressed himself beautifully in the following verse:

"See full of hope, thou trustest to the earth,  
The golden deed, and waitest till the spring,  
Summons the buried to the happier birth;  
But in Times' furrow duly scattering;  
Thinkest thou how deeds by wisdom sown may be,  
Silently ripened for eternity."

31 N. State Street.

#### Dr. Goetsch Heads Long Island College's Surgical Department

Dr. Emil Goetsch, associate professor of surgery in Johns Hopkins University and surgeon to Johns Hopkins Hospital, has been appointed professor of surgery and visiting surgeon to The Long Island College Hospital. Dr. Goetsch will be director of the surgical service and head of the department of surgery throughout the college, hospital and dispensary.

Dr. Goetsch has had a remarkable training fitting him for the position to which he has been called. He was graduated from the University of Chicago with the degree of B.S., in 1903. He then became research fellow under Dr. Lewellys F. Barker, in the department of anatomy of the University of Chicago; later he received the degree of Doctor of Philosophy for graduate work in anatomy and pathology. He was graduated as an M.D. from Johns Hopkins University Medical School in 1909. Following his graduation, he was appointed assistant in surgical neurology in Johns Hopkins Hospital under Dr. Harvey Cushing. The following year he became assistant resident surgeon in general surgery under Prof. Halsted at Johns Hopkins. From 1910 to 1913 he devoted himself to general surgery as resident surgeon at Peter Bent Brigham Hospital under Prof. Cushing of Harvard. During the past five years Dr. Goetsch has been successively associate and associate professor of surgery at Johns Hopkins Medical School.

Long Island College Hospital is strengthening its teaching force on every side.



## General Scientific

### The Psychopathies. Somato-Psychoses and Neuro-Psychoses.\*

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The profound influence of the central nervous system, more especially of the cortex with its psycho-physiological processes, on bodily functions, circulatory, respiratory, glandular, and visceral, is now firmly established by extensive physiological, neurological, psycho-physiological, and psychopathological research work, both experimental and clinical. "The manner," says Darwin, "in which the secretions of the alimentary canal and of certain glands, as the liver, kidneys, or mammae are affected by strong emotions, is an excellent instance of the direct action of the sensorium on these organs." The heart is extremely sensitive to afferent sensory nerves reacts through the pneumogastric nerve nard has shown how the least excitement of peripheral sensory nerves reacts through the pneumogastric nerve on the heart. Similar work was carried out by the great physiologist, Mosso, and others, proving by graphic methods plethysmographic, pneumographic, cardiographic, the influence of sensory, ideo-sensory and emotional disturbances on visceral functions. My own pneumographic and sphygmographic, trom. According to the investigations of the great physiologists, Pavlov, Vasiliev, Babkin, Savadski, Mishtovt, Orbeli, and the great English physiologist, Sherrington, and others, it is now firmly established that sensory, sensori-ideational, and emotional excitations bring about extensive motor, respiratory, circulatory, and glandular reactions. The clinical studies of Reimann, Arndt, Shultze, as well as my own clinical studies go to confirm the same interrelation of brain function and bodily activities. The experiments of Cannon, Shohl, Wright, and de-la-Paz, and others, carried out on animals, prove the intimate relation of emotion and adrenal secretions, the increased secretion of epinephrine resulting in glycosuria.

Early investigators, Bidder, Schmidt, Richet, observed the fact that the sight of food causes secretion of gastric and intestinal secretions. Pavlov has shown that the central nervous system acts on the secretion of the stomach through the vagi nerves which innervate its glandular activity. Pavlov made a gastric fistula in the dog, then exposed the oesophagus, opened it, and sewed the cut end of the edges of the wound. Food taken by the mouth fell out through the opening, so that the food did not reach the stomach, but the operated dog saw and enjoyed the food while in the buccal cavity. The sensory stimulations and enjoyment by the sensorium resulting by efferent nerve currents in an abundant secretion of gastric juice which could be easily measured by a pipette inserted into the gastric fistula. In fact, Pavlov found that while there was abundant secretion under such conditions of a purely psychic character, there was little or no secretion when the food was put through the fistula directly in contact with the mucous lining of the stomach, thus proving by a simple experiment the paramount importance of psychic stimulations even in such a fundamental function as digestion. Pavlov and his school find that there are two moments in the process of secretion: The *psychic moment*, the perception of the food and the *chemical moment*, when the food comes in direct contact

with the gastro-intestinal glands. According to Pavlov's experiments, now fully verified by others, the psychic moment is by far more important than the chemical moment.

By "unconditional reflex" is designated the chemico-physiological reaction of the organism to a normal, psycho-physiological stimulus, such as the direct sight and taste of food, bread, milk, meat, etc.

By "conditional reflex" is indicated the chemico-physiological reaction of a purely associative, mental nature, formed by a sensory stimulus artificially associated, in the mind of the animal, with the unconditional reflex. Thus during the time the animal is fed, a light of various colors is flashed, a whistle is sounded, or various figures are shown to the animal, as Dr. Orbeli has done. After a series of repetition, twenty, thirty, fifty, a hundred, the animal reacts with abundant secretion to that artificially associated mental stimulus, even when no food is given or shown to him. Vasiliev, Mishtovt, Savadski, Babkin, Orbeli, and others have experimentally confirmed these results.

Similarly in the experiments carried out by me on the galvanic reflex, or galvanic reaction as I termed it, the results go to confirm the same relationship, the influence of mental states on the total energy of the body. Various investigators, German, French, Swiss, Italian, Russian have shown that a current sent through the body becomes modified or increased under the influence of mental states. Feré explained this galvanic reflex as due to reduction of bodily resistance by men-

tal stimuli  $\left( \text{Ohm's Law: } C = \frac{E}{R} \right)$  Intensity of

the current is inversely proportional to resistance. This has gone the round of the main European laboratories.

When in co-operation with Professor T. H. Kalmus of Queen's College, Canada and the Massachusetts Institute of Technology I undertook those experiments we followed suit, putting the cell or battery, the human body in the circuit with the galvanometer, and watching the deflections under various mental states and conditions. It is remarkable how inert, dull, and suggestible scientists are. It was by mere accident when the cell happened to become exhausted that we discovered that the galvanic reflex or reaction still persisted. The electric battery or cell had nothing to do with the reflex. The fact is the galvanic reflex is not at all a function of resistance, but of electro-motive force coming directly from the human organism.

With the co-operation of the late Dr. Nelson of Harvard Pharmacological Laboratory and at my private laboratory we carried out a series of experiments on animals, guinea-pigs, rabbits, dogs, and cats, obtaining the same results. We discovered that the animal organism is a generator of electro-motive force the variations of which are affected by mental states. The organism consists of cells not only in a biological sense, but also of cells in a chemico electrical sense. Thus a series of experiments, covering a period of two years of persistent investigations, have firmly established psycho-physiological galvanic inter-relations, amply confirming the vague, inconclusive, but original experiments by Galvani. Among the many interrelations the following law established by us is the one requisite for our purpose: "The galvanic reaction is the result of variations of electro-motive forces, generated by psycho-physiological processes set into activity by the agencies of external and internal stimulations." We may say then that mental states, generated by the functioning activities of the cerebro-spinal and sympathetic

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nervous systems, affect not only glandular secretions, but also influence the resultant of organic activities, as manifested in the galvanic reflex with its galvanometric deflections.

In a letter to me Pavlov writes that he is at work on the higher activities of the brain of the animal, that he studies mental states by the method of conditional reflexes. According to Pavlov,—mental life, however complex, can be studied successfully by reactions of glandular secretions, and it may be added by galvanic and other reactions.

An intimate relationship exists between the functions of the central nervous system on the one hand, and the motor, respiratory, circulatory, glandular, visceral activities on the other. This vital relationship, unobtrusive to the casual observer in the normal state of the organism, stands out clear and distinct in the domain of functional nervous and mental diseases, such as hysteria, hystero-epilepsy, larval epilepsy, neurasthenia, psychasthenia, and many other allied maladies of a mental nature. Such functional mental disturbances are termed by me *psychopathies*. In psychopathic affections, regarded from a purely psycho-pathological standpoint, the disturbance consists in dissolution or dissociation of neuron aggregates with their efferent reflexes from the central cortical neuron aggregates with their concomitant principal or primary will personality, or personal self, and the formation, frequently, of non-adaptive reflexes.

Psychopathies are essentially affections of associative mental life. Psychopathic diseases have as their psychopathology a dissociation of neuron aggregates from the main set of cortical neuron systems, often in the frontal areas, with formation of associations with other neuron aggregates, resulting in the inhibition of normal reactions and manifestations of abnormal, morbid "unconditional reflexes." This psycho-pathology of functional, mental diseases, the result of my experimental and clinical work of many years, has in some neurological and psycho-pathological quarters been dignified with the title of "*Reflexology*," in contradistinction to the Austro-Germanic, Freudian, so called psycho-analytic, symbolic mysticism of sexuality, which, on account of its strong, sensational *psychopathia sexualis*, has been the rage not only of laymen, but also of some medical men, both in this country and abroad.

Studied from the clinical and psychological standpoints, psychopathies as put forth in my works, are diseases of the subconscious personality.

A brief outline of the classification of nervous and mental diseases, made by me in my various works, is of importance to a clear understanding of the etiology and differential diagnosis of neurotic affections.

The various forms of nervous and mental diseases may be classified into *organic* and *functional*.

By *organic* troubles I indicate all pathological changes of the neuron and its processes, dendrons, dendrites, and neuro-axons, taking place in the cytotreticulum of the nerve cell. Under this category come such diseases as acute or suppurative encephalitis, intracranial tumor, gummata or lesions of the various regions of the cerebrospinal system of the cortical areas, or of the central regions encephelomalacia, sarcomata, carcinomata, gliomata, syphilomata, and tubercular affections of the encephalon, basal ganglia, corpus callosum, internal capsule, crus cerebri, cerebellum, pons, medulla, and the ganglia and nerves of the spinal cord, myelitis, progressive bulbar paralysis, spinal lateral sclerosis, posterior sclerosis, cerebro-spinal sclerosis, amyotrophic lateral sclerosis combined lateral and posterior sclerosis, syringomyelia, and many other

neuron degenerations resulting from cytolytic changes in the cytoplasm and more specially of the cytotreticulum of the neuron and its processes. Under this category come also parasymphilitic maladies taber dorsalis general paralysis, or paretic dementia, and all mental and nervous diseases of an involuntary and degenerative character. Such diseases are termed by me *Organopathies*, or *Necropathies*, the clinical symptomatology depending on the cytolytic or neuron dissolution of the anatomical cell structures of the neuron.

By *functional disturbances* I indicate all neuron changes in which the neuron functions and their associative processes with their reactions to external and internal stimulations are involved in the pathological condition without, however, affecting the anatomical structure of the nerve cell, such as the fibrillar structure of the cytotreticulum and its prolongations. The pathological changes are not necessarily permanent as long as the degeneration as not reached the reticular structures of the neuron. This may be found in the spinal anaemias and hyperaemias, cerebral anaemias and hyperhaemias, cerebrospinal thrombosis and embolism, temporary and partial occlusion of arteries of various parts and localities of the cerebrospinal system, conditions of hemicrania, simple and multiple neuritis or pseudo-tabes, as well as the various forms of neuralgia, chorea, idiopathic epilepsy, larval epilepsy, epileptoid states Dämmerzustände, the early states of paralysis agitans, the choreas, occupational psychoses and neuroses, exhaustion psychoses and neuroses, infection psychoses and neuroses, and generally toxic and auto-toxic psychoses and neuroses, periodical or circular insanity, paranoiac and paranoid states, manic-depressive states, and various other nervous and mental maladies. Such functional diseases of the cerebrospinal nervous system may be termed *neuropathies*.

Neuropathic diseases are disturbances of functioning activity of the neuron due to defective metabolism in cellular nutrition. This may be either of a catabolic character, or of a defective anabolic nature, or sometimes of both defective anabolism and catabolism in the general functioning of the cell, often brought about by the chemico-physical constitution of the blood, toxæmias and especially by internal stimuli-secretions, hormones and other agencies. The pathological condition in functional nervous and mental diseases of the neuropathic type produces few, if any, anatomical, structural changes in the neuron, the cytotreticulum or fibrillar neuron structure generally remains unaffected. The neuropathology of functional neuropathic diseases is more of cytoplasmic nature, or better so to say of the *cytolymph* neuron lymph of the neuron aggregates, being essentially of a *chemico-physiological* nature.

Neuropathic diseases include maladies in which the neuron undergoes degenerative changes which at first may bring about an apparent increase, then an inhibition, and finally a complete suspension of neuron function, not terminating in the destruction of the neuron.

This follows the general physiological law that all stimuli or causes which tend to destroy the vital functions of the cell activity begin as stimulants and afterwards become depressants, finally ending in the total destruction of the cell involved. Thus in many cases small doses of opium or morphine, and other toxic and antitoxic products bring about an excitement of the nerves. In such cases, if our object is the induction of depression the dose should be increased or repeated. In ether or chloroform anaesthesia before the deep state of anaesthesia sets in there is a stage of excitement which passes off as the inhalation of prolonged and increased.

This law also holds true in the case of the process of degeneration of the nervous system in the various forms of nervous and mental diseases in the downward course of neuron disintegration.

In neuropathic disturbances cythothesis, or neuron restitution, is possible. For as we have pointed out neuropathic affections are produced by poisons, inorganic and organic, autotoxic products, anaphylatoxins, hyposcretions or hypersecretions, or by total absence of glandular secretions and hormones in the economy of the organisms. From a psychiatric standpoint, here belong all the temporary or recurrent, melancholic and delusional states, puerperal mania, epileptic insanity, mental aberrations of adolescence and climacteric periods, periodic insanity, alternating insanities, in general all the affections presently described by Kraepelin and his school as manic-depressive insanities.

Where, however, the disease depends not on the pathological degeneration of the cytotreticulum or cytoplasm, or of the cytolymph, but rather on the *interrelation* of the neurons or of aggregates of neurons, or on the dissociation of aggregates of neuron-systems, affecting the associations of the neuron-endings of dendrons, collaterals, or neuron-endings of the neuro-axons and their fine terminal arborizations, whether by retraction as claimed by Ramon y Cajal and by myself, in other cases by affecting the conductivity of the synapses, raising partly, or completely blocking neuron transmission, as pointed out by the great English physiologist Sherrington and by my own work in psycho-pathology, the result is the same,—psycho-physiological and psycho-pathological *dissociation* which is the basis of many mental diseases, termed *psychopathies*. The dissociation is usually in the various cortical areas, occipital parietal, temporal, temporo-sphenoidal convolutions, or their group combinations and associations of groups and systems, dissociated from the systems and groups of the frontal cortical area. In psychopathic troubles the neuron or the neuron systems and groups are only *dissociated*, but they remain unaffected, they are perfectly normal and healthy, but being dissociated, they are *subconscious*, often incapable to be called into function or be controlled by Will of the total personality co-related with the functioning activities of the frontal lobes.

Briefly stated:

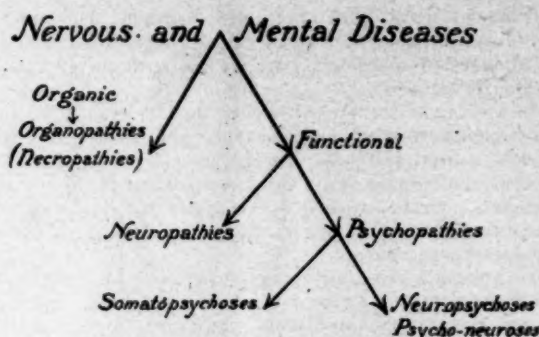
*Organopathies* or *necropathies* include a group of psycho-physiological clinical symptoms, motor, sensory, and mental, accompanied by structural, necrotic changes of neuron groups, terminating in necrosis, in the ultimate destruction of those groups in the course of the pathological process.

*Neuropathies* include a group of psycho-physiological manifestations due to pathological, functional, neuron modifications, capable of restitution through a more perfect, more normal metabolism.

*Psychopathies* are pathological phenomena of psycho-physiological dissociation and disaggregation of neuron systems, and resultant disturbances of aggregate functions, the neurons themselves remaining undamaged and untouched.

The psychopathies in their turn may be subdivided into: *Somato-psychoses* and *Neuro-psychoses* or *psychoneuroses*.

The classification may be represented by the following diagram:



The psychopathies may present mainly somatic symptoms, such as paralysis, monoplegia, hemiplegia, paraplegia, contractures, convulsions, tremors, anaesthesia, hypoaesthesia, hyperaesthesia, paraesthesia of various organs, glands, and tissues. Such mental diseases may be termed *somato-psychoses*. The somatic psychoses or neuroses would comprise the various manifestations of what is at present described as hysteria, neurasthenia, shell shock, war shock, as well as the milder forms of hypochondriasis. In all such diseases the psychic states form the prominent elements of the mental malady. The patient remains unaware of the underlying mental ground. So much is this the case that the patient is often offended, if his trouble is regarded as purely mental in character. The side of the disease is then said to be submerged subconsciously.

In the *psychoneuroses* or *neuropsychoses* the physical symptoms are on the contrary few or none at all, while the predominant clinical symptoms are entirely of a mental character. The patient ignores his physical condition even if they do exist, his whole mind being occupied with his mental troubles. Such conditions are to be found in all obsessions, fixed ideas, imperative impulses, amnesias, aphesias, paraphasias, aboulias and other allied morbid states. Thus one patient is in agony over the unrighteousness of his conduct, another is obsessed by a terror of some mysterious—agency, or by religious and moral scruples.

The two clinical forms of psychopathies are in strong contrast to each other. In the somatic psychopathies, or somatopsychoses, the patient brings before the physician purely physical symptoms—stomach and intestinal derangements and pains, contractures, tics, spasms, menstrual disturbances, affections of the respiratory tract, troubles of sexual organs and functions, paresis, motor and sensory disturbances, headaches, insomnia, and similar bodily disturbances. It is for the physician to discover the underlying subconscious mental states. In the psychoneuroses the patient omits all reference to his physical condition. He usually states that he has always been physically well. Some patients assure the physician that as a matter of fact they are sure that they will always be well, that the whole trouble is purely mental in nature. "I have no physical illness," the psychoneurotic patient tells the physician, "all my troubles are mental. If you could cure me of my mental suffering, I should be perfectly happy."

#### Differential Diagnosis:

The psychosomatic patient lays stress on his physical symptoms, and is offended when they are declared to be mental.

The psychoneurotic patient, on the contrary, insists on his mental symptoms and becomes impatient, if the physician pays attention to physical conditions and symptoms, or examines various bodily disorders.



The psychosomatic patient believes he is afflicted with some awful, incurable, physical malady, such as cardiac trouble, tuberculosis, or some other fatal, bodily disease.

The psychoneurotic, on the contrary, ignores all physical troubles, but he thinks he is on the verge of insanity.

The psychoneurotic seeks to be assured that he is not an incurable invalid.

The psychoneurotic wants to be certain that he is not going crazy.

The psychosomatic wishes to know positively, whether or no he is really and truly free from some malignant disease, some horrible infection, from some fatal, physical malady.

The psychoneurotic is anxious to be convinced, that he is not insane, and that he is not to end the rest of his days in some retreat or in an asylum for the insane.

The psychoneurotic usually refuses physical treatment, he is introspective, has a relatively fair insight into his condition, and rarely drifts into various fake cures which fill the air with their appeals and advertisements.

The psychosomatic patient is extremely credulous, he is the victim of patent medicines, consumes all sorts of drugs, homeopathic and allopathic, supplies a living to predatory chiropractors, naturopaths, osteopaths, and after he has gone through the whole gamut of absurd treatments, often ends in the mire of Christian Science with its faith in telepathic powers of death-thoughts sent by wicked minds.

The clinical difference between somatopsychoses and neuropsychoses is a fundamental one, and is of the utmost consequence in prognosis and treatment.

In other words, the somatopsychoses simulate neuropathies and neuropathies. Thus many so-called "hysterics" simulate tabes, paralysis agitans, hemiplegia, monoplegia, paraplegia, epilepsy, and other neuropathic and necropathic diseases, while many "neurasthenias" and "psychosthenias," "hypochondriasis" and other allied states simulate tumor or cancer of the stomach and intestines, intestinal obstruction, glandular derangements, cardiac, laryngeal, pneumonic, hepatic, splanchnic, ovarian, tubal, uterine, renal and other bodily affections.

The neuropsychoses or psychoneuroses simulate all forms of mental disease, beginning with melancholia mutism, aphasia, amnesia, aprosexias mania, ending with general paresis and dementia præcox.

At this juncture I thought of making a brief review of the neuron structure and its interrelation, their formation into groups and systems, and their relationship to the moment-consciousness, the theory of neuron disaggregation, the threshold oscillations, their rise and fall of thresholds of neuron "synapses," as Sherrington terms them, the relation of fatigue and cellular energies in their relation to the symptom-complexes of functional nervous and mental diseases, the relation of Weber-Fechner law, and other important principles of Psychopathology. All this, however, is impossible to encompass in the brief space of one lecture. It will involve us into complex considerations, biological, neurological, psychological, and psycho-pathological which will carry us far beyond the scope of our present lecture. I can only say that the epoch-making researches of Pavlov have helped towards a clear understanding of the pathology of functional nervous and mental diseases, more especially of the Psychopathies.

Recently Prof. T. Bralsford Robertson of Johns Hopkins, in a monograph published in the "*Folia Neuro-Biologica*," Band VII, 1913, Amsterdam, advanced a bio-chemical theory, based on autocatalytic chemical

neuron reactions as the foundations for the various conscious and subconscious manifestations of mental activities, described in my various works on the subject.

Robertson summarizes his view: "My hypothesis (of autocatalysis) does not traverse the hypothesis of Sidis (moments-consciousness) it merely supplements it and renders necessary a readjustment of the physiological equivalents of his terminology. . . . It is obvious that for the purpose of purely psychological analysis the two hypotheses are almost completely interchangeable; but for Sidis' 'moments-consciousness' we must read not 'neurones, but, 'traces,' 'channels,' or 'deposits of autocatalyst.'"

Should Robertson's hypothesis be confirmed by further facts and experiments we may have a biochemical foundation for some of the more obscure manifestations of conscious and sub-conscious mental activities.

(Concluded in October Number)

### SOME CONCEPTS OF HUMAN SEXUALITY.\*

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In my work with you I feel that my function is, in so far as lies within my power, to prepare you for private practice. We have seen a number of cases in the clinic this year which you have perhaps noticed were dismissed without operation or suggested treatment.

Every general practitioner, let alone gynecologist or neurologist, meets cases in which the sexual element is prominent if not predominate. How skillfully and how safely to the patient and to yourself you handle them will depend upon your honesty, your knowledge and your tact. They are extremely important cases to the community, to themselves and to you. You will remember that the desire for reproduction is, next to hunger, the strongest primitive urge. Before the birth of his soul, man got along very comfortably with his sex. Even now the almost extinct bushmen of Australia, who subsist upon grubs and roots which they unearth with their bare hands, and the most wretched Fuegians, who live with less shelter than the squirrels, are not more concerned about the mechanism of reproduction than are many other mammals.

With the dawn of man's inner consciousness, with his appreciation of the presence of mysterious forces infinitely beyond his ken, with, if you choose to so express it, his "eating of the tree of knowledge" a wholly different period commenced. The vegetative and the physical stages were completed. The care-free eons when life consisted of eating, copulating, fighting and dying, were replaced by the age not yet ended, probably not to be ended on this earth—the age of worry. The dumb brute fears the present; man suffers a thousandfold greater, for his fears are not only present, but past and future as well. He fears both the known and the unknown. He worries.

When our arboreal progenitors awoke in that gray dawn so many ages ago, what facts first struck their new-found mental vision? Naturally, the most awe-inspiring and most essential to their personal existence—the lightning, the tornado, the earthquake, seedtime and harvest. Sudden death, food to live upon, in other words, the elemental forces of destruc-

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tion and of reproduction—the one terrifying, the other gratifying. As they trembled in abject terror before mysterious destructive forces, so they expanded with thanksgiving for the harvest, the warm winds, the life-giving sun. Of all these supernatural phenomena their most intimate acquaintance was with that of seeding, growth and harvest. From their deification of general reproduction to the surrounding of human sex relations with mystic beliefs and practices was a short and much-to-be-expected step. Hence we find sex in one or another form included in every religion, at some period of its development. This is an interesting study and a most illuminating one, for it enables us to understand many modern phenomena. The goat of Mendes has left his hoofprints across the pages of religious history to this very day.

Sex matters were already important from the standpoint of procreative instinct. This association of them with benign and malign supernatural influences, this making them a part of man's religion, tremendously increased their place in his life. He feared to transgress; he worried. Of course, his priests neither minimized his anxieties nor belittled their own importance in his scheme of life. Even today a Christian church, whose organization merits the respect and admiration of every thinking man, lays down most explicit rules for the guidance of members in their sexual life—and imposes penalties for their infraction.

Procreative instinct, phylogenetic experience and religious belief all tend to emphasize our sex relations and to so interweave them in the fabric of our daily lives, that no one of us is free from their influence in nearly all his actions.

If you would understand men you must understand the most pervasive factor in their lives. If you would cure sick men you must not dismiss their worries without attention—if you do, the Christian Scientists will add them to their number.

I find it well-nigh impossible to discuss sexual abnormalities in the brief hour of a lecture course, for the subject is so large and our knowledge of it is altogether inadequate. I can not refer you to texts on the subject, for the average writer who qualifies as an expert upon sexual matters is very apt to be governed by preconceived prejudices. Mental equilibrium and sexual interest do not seem to occur together. I have no choice, then, but to give you as fair an estimate of our present knowledge as it is possible for me to do and to depend upon your own judgment and your own knowledge of relative values to select the wheat from the chaff.

Before attempting to consider abnormal female sexuality, we must try to achieve some understanding of the normal. I have not the slightest idea that any man ever understood any woman—or ever will. Our masculine minds do not comprehend the feminine; our nomenclature provides no terms whereby we may record the fleeting shadows we occasionally glimpse. There is no road along which I may guide you, therefore we must expect to be torn by the briars of error and to stumble frequently over the debris left by other travelers.

Lest I be misunderstood, I wish to declare emphatically my great respect for all which is pure and noble in woman, and in man also. That sexual attraction tends to the union of man and woman I readily grant. That it is all there is to the human relationship can only be believed by him who de-

fends the violation of Belgium. The man or the woman who, having attracted and partly held another by virtue of sexuality, does not or can not develop from it a much vaster and more satisfying intellectual love, has my sincere pity. I regard the sexual relation as affording an opportunity for two individuals to establish that intellectual comradeship which in time should develop into spiritual love of a type to satisfy the most idealistic.

Perhaps we had best commence upon the comparatively firm ground of our own sexual selves. As we have sexual organs proper and also have many, many secondary sex characteristics, so we have distinct primary sex desire and secondary mental traits including a sort of "mental sex desire." The former is expressed by intimate personal contact which naturally leads to erection, intercourse, emission, and then to indifference if not distaste. The secondary characteristics include pity, generosity, honor, appreciation of music, art and literature—in fact, most of the nobler qualities of man are dependent upon testicular secretion.

During youth this primary desire and the secondary "mental desire" are markedly separate and we behold the apparent paradox of intense idealism concerning all things feminine coupled with the grossest sexual dissipation. At this age a woman is classed as a being to be worshipped or (if she has intercourse) as a prostitute to be sexually satisfied with and then cast aside. Some men seem to retain this viewpoint throughout life and we find the author of the loftiest idealistic verse, at midday, surrounded by courtesans at midnight. I am convinced that most men, or at least most intellectual men, gradually merge their primary sex desire and their "mental sex desire," with the latter slowly outweighing the former. As we grow older we should expect to care less and less about the act of intercourse, per se, and more and more about the mentality of the woman until we eventually indulge in intellectual intercourse only. This is as it should be. Our interest in woman moves upward with the years. As we ourselves attach more significance to mental traits we naturally pay less attention to physical ones and the man of sixty is quite apt to condone the feminine misstep which the youth of sixteen felt put a girl outside of the pale. Perhaps this explains the notorious gullibility of so many old men.

Briefly, then, man's primary sexuality is centralized upon his sexual organs—he always knows when he is sexually excited. His one overwhelming desire is to be satisfied by an emission. An erection and a conscience do not exist simultaneously. His "mental sex desire" should normally increase at the expense of his primary appetite until the latter is entirely lost.

Woman is quite different. We had best review her position clearly to understand why.

The female, with few exceptions, perpetuates the species. She not only gives birth to, but also feeds, cares for and defends the young. Nay, more; she selects their father—although he thinks he does it. She is "armed and engined for one purpose"—the continuance of the race. Bearing this fundamental fact in mind, one is not surprised at some of the unreasoning traits of the feminine mind. Is she jealous? Remember that her charms once held a man steady between her children and the prehistoric cave bear or the terrible saber-toothed tiger. Does she begrudge the evenings at the club? No doubt age-old memories of sudden terror from savage beast or ravishing vandal, when her only defender was

away, make her remarks rather more caustic than seem necessary. Is she sometimes flattering and deceitful? When resistance was beaten down by force of arms what could woman do? How many vanquished races would be aught but memories had not their women been conquered yet unconquerable? We sometimes hear that she is selfish, even mercenary. Suppose she is. Is it not her children who have had to be protected throughout the ages? Their father was busy with the other men in the council lodge, at the Forum, on the Spanish Main, signing the Declaration of Independence, or perhaps he is in the Medical Reserve. Who kept the children from the fangs of the wild dog, from underneath the traffic on the Appian way, from slavery and dire destruction? Who is listening to their evening prayer and tucking them in bed tonight? Who holds the family together to the end that they may be the better fitted for life in all its fullness? Father is at the bank or digging ditches, making speeches or selling calico. He is fighting back the grim gray wolf that scratches at his door even as he once fought back the cave bear. He is striving for place an hundred-fold harder than he once strove for the leadership of his little band of cave defenders, for now the battle is of brains instead of brawn, and he who would succeed must pay the price of constant effort and of continual absorption.

Parenthetically, let me suggest that right here lies a cause for the domestic unhappiness of many a woman. She wants a real, live, human husband who will be interested in her and who will strive to keep her favor as he once strove to win it; she doesn't like an abstracted automaton who grunts a monosyllabic answer to her sprightliest breakfast table conversation while he glances over the market reports. I wonder if the possession of a real he-man—even though he drank or swore—might not satisfy many women better than being wives of efficient, successful, here-in-the-flesh-but-absent-in-the-spirit business men.

To proceed. If she is entrusted with the perpetuation of mankind should we not expect to find her strongest features elemental ones? In truth, I think we do.

Civilization has spread a thinner veneer over her instincts than over man's, and when any vital interest is touched she responds by instinct or intuition, not by logic or cool decision. What are her vital interests? All things connected with the production and maintenance of offspring—the more immediate the connection the greater the interest. The procuring of a husband is the first step toward children, hence we would expect much interest in all the arts of the boudoir. Personal adornment and the cultivation of the social graces are means to the one end. I have heard good people sneer at the factory girl who wears a month's wages on her head. Why sneer? She's simply fulfilling her destiny as best she can. The Congo belle coquettishly toying with her nose-ring and milady who has just had Tiffany reset her diamonds in the latest vogue are "sisters under their skins." Remember the cave-bear and the Roman victor and don't condemn her as a silly little fool when she paints her face—rather bow before her penciled eyebrows as symbols of a vast primeval force. Esther, pleading for her people, dressed herself in fine raiment and softened the heart of Ahasuerus. You may not like party dresses on your office girl, but she has the weight of the centuries

on her and must obey the call of her phylogenetic experience. She can no more help being interested in her own beauty, her youth, her charms and how best to display them than man can help being interested in "business."

Having procured a husband, he must be held, for the sake of the children and for the future children. Right here let me mention that this necessity is one explanation of the so-called "inferior position" of woman and one cause for infelicity. It is evidently vitally important to hold him, hence any arts tending to enhance her value in his eyes are legitimate. She prides herself on her housewifery and her social importance. She is intensely jealous of his attention and his time; no other woman or interest *shall* steal him from her and her children. Nevertheless, a little display of jealousy on his part is not entirely displeasing to her—if she was not highly important to him he would not object to her interest in another. Some one has epigrammed woman's interests as "clothes, cookery and courtship." Like most such sayings, it is undoubtedly partly true.

I scarcely need to mention her fierce mother-love, because it is so well understood. Probably the strongest human instinct, it never needs excuse; it awes mere man with its sublime self-abnegation.

Now please do not interpret the preceding remarks as criticism of womenkind. Far be it from me to dare criticism of God's most subtle handiwork. The desire for husband, home and children may lead one type to a careful preparation for life and an earnest endeavor to live it to its best. Another type may transmute the same instincts into vanity, coquetry, jealousy and "nagging."

With this incomplete review of her mental attitude, perhaps we may essay, more specifically, her sexual life. We have just said that man's primary sexuality was centered. Woman's is irradiated. She is interested in men, but they must come up to her standard. They must be smart, strong, brave or distinguished; they must treat her in a certain way, must be kindly, considerate, courteous, sometimes domineering—must, in short, make some mental appeal. Very, very few inexperienced girls are ever attracted by *any* man, it's always *the* man. Perhaps this explains why women nearly always marry men older than themselves and why so few of them marry inferior men.

The man may become more and more intimate with her person, but he must do so slowly, for she does not realize what is happening, as does he. Nor does she readily discover her primary sex desire; she must be carefully and patiently taught by the man to enjoy intercourse and to experience the orgasm. Even after she has reached this point, her mental and secondary characteristics play a larger part than does local pelvic congestion. She is not excited pelvically alone; she is excited all over. Correspondingly her display of affection is quite different from man's; she cares more about general caresses and endearments. In short, we may say that her secondary traits, including her mental sex desire, are paramount and that she does not know what primary sex desire really is unless she has been educated.

It seems impossible to define or to circumscribe woman's sexuality. Possibly this is the main reason for the unsatisfactory character of the literature on the subject. I think that we will all agree that local sexual excitement, recognized as such and without other manifestations, does not exist in women of



normal mentality. Conversely, sexuality, in its broader sense, enters into every feminine act, emotion and impulse. Some one has observed that love is woman's life; merely an incident in man's. Let us say, then, that woman's sexuality is irradiated over her entire sphere of action, man's largely confined to the local manifestation.

As a corollary, we must admit the existence of an infinite number of physical and psychical "contact points" each capable of causing slight and probably subconscious excitation.

Interesting as the phylogenetic origin of individual contact points is I can only pause, in passing, to suggest that our common ancestral origin and eon long accumulation of similar experiences may explain why "the Colonel's lady and Judy O'Grady are sisters under their skins."

The stimulation of many contact points is necessary to cause frank sex excitement. As a consequence woman is much slower of excitation than man is, is sexually appealed to by an infinitely greater variety of stimuli and is never entirely unapproachable through some of her contact points. A thousand roads converge to one end—maternity. Most of these roads are unknown to her and the very mention of their termination is often quite sufficient to provoke an expression of disgust at masculine grossness. I am not here considering the woman, who, through low mentality or large youthful sexual experience, superimposes a masculine type of frank sex desire, locally felt and locally satisfied. Nor do I mean to include those types which prove the rule by their exaggeration of aestheticism.

Granting these premises, we more readily understand the extreme difficulty of combining two distinct phases of male sexual feeling with the thousand phase irradiated sexuality of woman.

A woman marries. She does not understand herself, let alone her husband. She is adrift in a strange sea with only instinct, somewhat vitiated by civilization, to guide her. Often her wide sex feeling, which we may call love, and her common-sense enable her to bridge the period of adjustment; to comprehend that her relations are, or soon will be, natural and thus to achieve normality—that is, a balanced love, satisfaction with her lot, steady nerves and mental placidity. Locally, periods of pelvic engorgement, enthusiastic intercourse, intense orgasm, pelvic detumescence with its accompanying physical and mental placidity; well-being and no regret. Life is pleasing to her. Her fundamental instinct is realized. You can almost recognize her by her firm, confident, assured yet kind and pleasing manner. So much for the normal individual.

How about her less fortunate sister? Her first sexual experience is either with that rara avis, a continent man, or with one who has gathered his knowledge of women sexually from prostitutes or from girls of easy virtue; the type above referred to who have acquired a frank masculine type of sex feeling. He cannot realize that she must be excited slowly, with infinite patience, through many psychic points, that her desire for intercourse—when she achieves it—is only a small part of her sex feeling, that she will never cease to yearn for affection and the many little attentions which might be called secondary sex stimuli. She will think that intercourse is all he cares about because he is locally excited long before she is, because he hurts her without seeming to care, because he is satisfied and

stops, even becoming apparently indifferent toward her. He feels assured of her love, and acts it. She must be reassured constantly of his or be miserable. And then the haunting fear of pregnancy so often lurks in the background to convert an unpleasant experience into a terrible one. Perhaps he is able to sexually satisfy her and to thus reverse the usual order by satisfying her mentally through physical gratification. Only too often, however, the years merely bring repetitions of the painful experience. Irritation after irritation, both mental and physical, leads to a distorted outlook on life, a chronic pelvic congestion with never an orgasm to relieve it, neurasthenia and semi-invalidism.

In an earlier day when bare existence was the problem, our great-grandmothers found neither time nor inclination for introspection; primitive women have developed fewer contact points than their more intellectual sisters. Consequently, we find much less dissatisfaction among the poor and ignorant. It is our wealthy, educated, refined patients who furnish the most numerous examples. I think we may safely say that culture and dissatisfaction bear a direct ratio to one another. Perhaps early training whereby the girl is taught to worship "niceness" rather than normality may be partially responsible, although I am free to admit disbelief in the submergence of a normal mental equilibrium by the inculcation of unnatural standards—a neurotic basis, or, more especially, disagreeable experiences would seem the determining factors.

What are the diagnostic features? I regret that there are none, so far as I know. The symptom—complex may make one suspicious. A well educated, refined woman capable of appearance in any society keeps her appointment with you promptly. She is interested in civic improvement, Red Cross or social settlement work—yet her children are always first. Often she is of the artistic temperament—she may dabble in literature—Shelley or Browning, never Carlyle or Kipling. The little premature lines about her immobile face point downward. Her rather lusterless eyes look you over coolly. She sits too quietly or shifts uneasily. She is at ease in your presence, by an effort of the will. Her complexion and color are not quite normal. Little remarks indicate a mental lassitude which you are at a loss to understand. She answers your questions clearly and with frankness until you approach the subject of sex relations. Her manner changes. Now she either answers crisply or deviously. "Of course I don't enjoy intercourse," and she looks you indignantly in the eye. Or with averted face and semi-sigh, "Oh, yes." And when you indirectly touch the sex sphere, as in urging her to become herself in order to participate in her husband's interests and to be a real helpmate, there comes a bare flicker of shadow across her face. Her anamnesis is rather colorless. Family and personal histories negative. Married ten years ago, at twenty-five or over, always well, until past five years or so. Can assign no definite date as the beginning of her trouble. Perhaps a child or two. Gradually developed insomnia, lack of interest in things which usually please. Headache, not definitely localized, now and then. Nervously irritable, slightly melancholy without appreciable cause, appetite variable. Tires easily, new stimuli act for a time and then become passé. Dull continuous sacral backache, irritable bladder. Menses have gradually become more profuse and of longer duration, often preceded for sev-



eral days by diffuse lower abdominal pain and accompanied for the first day or so by some steady aching pain, apparently in the uterus. A white-of-egg leucorrhoea, worse just prior to the period. Always a feeling of weight in the pelvis, worse on long standing—sometimes described as a swollen feeling. Perhaps a slight loss of weight.

Your examination discloses a fairly well nourished patient, skin seldom clear, muscles a trifle flabby, reflexes quick, pupils somewhat dilated. Heart of eighty or over and easily accelerated. On separating the hypersensitive labia, the purplish mucosa presents, being unconfined by the flabby sphincter vaginae. A little clear or slightly turbid mucous exudes from the external os, contrasting prettily with the reddish cervix. She mentions some pain as you bring the freely movable uterus into normal position and palpate it between your fingers. It is not as resilient as you expected—you note the throbbing uterine arteries and the indefinite sensation of thickening conveyed to your fingers by the vaginal walls. Not being able to palpate her insensitive tubes, you decide that they are normal, only to be surprised upon reaching the ovaries by their hypersensitivity. Nothing demonstrably wrong, unless we are to consider a slight sagging of the uterus sufficient excuse for ligament shortening or are one of those good old doctors who, when in doubt, curettes. These patients may well be considered cases of sexual dissatisfaction.

Some cases show more pronounced loss of weight, fine tremor, dilated pupils, very quick reflexes, flushed moist skin and constantly rapid heart. It has been suggested to me that many cases erroneously diagnosed as early Graves disease are in reality of this type. Of course, emotional excitation—especially fear—has long been recognized as a determining factor in its appearance. Many of these sexually unsettled cases are suffering from fear, or its prolongation, worry, and thus afford splendid ground for the subsequent development of true Graves.

Shall we curette her? And add to the thousands of disappointed ones. Shall we shorten her ligaments by the latest method from the fifty-seven varieties so far devised? Shall we stuff her unresisting vagina with lamb's wool twice or thrice weekly? Worst of all, shall we institute "pelvic massage" and mayhap engraft a masturbation habit? May we side-step the issue and advise her to consult a neurologist?

When lacerations, malpositions, or other gross lesions complicate the case the task of correctly evaluating the influence exercised by them and that exerted by the sexual state becomes well-nigh superhuman. In passing, may I say that the restoration or normal sexual satisfaction by perineorrhaphy is, in my judgment, ample reason for urging the repair of all relaxed vaginal outlets. It has seemed to me that the improvement in so-called reflex symptoms following plastic work was often attributable to such restoration. It is in these complicated cases that our greatest danger lurks. How very embarrassing to do a nice Gilliam and a perineorrhaphy that you are proud to have your friends see and to have the patient never feel one bit better. Our position is menaced with every danger of error—with responsibility for more than life.

To the patient our appreciation and solution of her individual problem means the almost total transformation of her outlook upon life and all she holds dear

therein. To her family it means the restoration of the sympathetic wife and ever-patient mother. Shall we, then, carelessly brand her as "one of those neurotics"? Shall we subject her to the mental suffering preliminary to an operation—which, by the way, is very real—operate her, carry her through a period of convalescence to a perfect anatomical result only to find her *feeling* just the same or worse a year later? Perhaps it is the part of discretion to dismiss her as tactfully as may be, yet one's entire professional idealism revolts against such faint-hearted avoidance of responsibility. Especially is this true when we stop to consider the cumulative effect of years of such irritation. The pelvic findings will remain about the same, but the nervous and mental symptoms gradually increase until the victim is readily recognized as one of our "married spinsters." She is soured on life. Perhaps her normal instincts have found vicarious expression and she heads a band of militant suffragettes, maybe she manages the local branch of the anti-cigarette league and very frequently we find her vigorously censoring perfectly harmless "movies" in her capacity as a social purity worker. We sometimes wonder if she really knows anything about the "male brutes" and the social question. Always she wears an air of melancholy sorrow; earlier in life it was self-pity, now it has risen to the dignity of fighting for her "poor down-trodden sisters."

What can you do for her? If she is not intelligent, you had best do nothing. As above mentioned, those of low grade mentality are seldom victims of this particular trouble. If she is over forty, you had best avoid the issue—she will be too confirmed. Suppose she is young and mentally keen and that you decide to attempt to help her. First a direct and unashamed question as to her relations will confirm your suspicions and will open the subject with her. A brief statement of the seriousness of the condition, in its effect upon her health and upon the happiness of those dearest to her, will serve to place the entire matter upon the safe ground of dignified professional interest. You must then try to find out why she is not satisfied—this may be difficult and is often embarrassing to you. Don't let her see your confusion, but above all things don't smile to cover it. Just be serious and interested in her problem. First discover if her dissatisfaction has always existed or if it is of later development. If she has never been sexually satisfied, the problem is harder. It may be because her husband has always been satisfied too quickly or because intercourse has hurt her, or she may have married for reasons other than love; often it is entirely mental. Much tact and much skill are prerequisites to the discovery of the basic cause. If, on the contrary, the condition has developed subsequent to a labor, we may reasonably suspect a traumatic cause, more particularly a perineal laceration. If of later development, but without history of injury or disease, we would perhaps suspect some psychic cause such, for instance, as loss of affection for the husband, great anxiety, etc.

Your suggestions will naturally be determined entirely upon the specific causative factors. Many times you can not aid at all. Often the mere understanding of the problem assists the woman greatly. Most commonly you will find that her husband has been unintentionally selfish in that he has not realized the importance of satisfying her and the necessity of protracted contact. In other words, he has been

satisfied too quickly. Of course, an old posterior urethritis case with an irritable verumontanum can not be deliberate. Most men, however, can learn to prolong the act by mental inhibition of the orgasm. This is well understood by many Oriental races whose men pride themselves upon their ability to gratify their partner rather than upon the frequency with which they themselves can achieve orgasms. Mental causes for premature emission may be difficult to overcome. Lack of real affection, worry, fear, unsatisfactory surroundings all predispose to disappointing results.

Many of the methods used to prevent conception exert an equally deterrent influence. Let me suggest here that the voluntary discharge of seminal fluid elsewhere than inside the human vagina reacts most detrimentally upon the man's physique. It violates one of his primitive instincts and he suffers accordingly. The practice of withdrawal just prior to emission is most common. I believe the Bible attributes its introduction to Onan, but I suppose he was an imitator only. No woman was ever satisfied in that way and every man was always disgusted afterward. It is merely co-operative masturbation.

To continue with our case. We are supposing that you discover an absolute lack of sexual excitement, so far as the patient recognizes it as such, which has always existed; and that she has frankly stated her case to you. The next step is to consider the entire subject frankly and fully with both the patient and her husband together. Following this conference, it is well to talk the difficulty over with the husband alone. At this time some very frank suggestions can be made to him as to the modus operandi of the sexual act proper. Many times any position which brings the penis into more intimate contact with the anterior vaginal wall will cause much greater excitement. It is sometimes difficult to secure the husband's frankness about this part of their relations. In fact, it is much more difficult to get the husband to talk freely than it is the wife.

Often you will find that the first question asked will be about the prevention of conception. This must of course be handled according to the dictates of your own conscience.

Before closing the interview, it is wise to make an appointment for some definite time so that you may keep track of the case and possibly may offer further suggestions as you see how those already made have acted.

I hesitate to take up the subject of masturbation and of the perversions, but I feel that their importance warrants a brief mention. For the classical description of the masturbator I would refer you to Howard Kelly's "Medical Gynecology." I shall not attempt his detailed description.

Cohn says, "The man who says he has not masturbated does it yet." Undoubtedly the great majority of women have not masturbated and know nothing about it. On the other hand, woman, when she does masturbate, carries it to a decidedly greater extreme than does man. In it, as in everything else connected with the sex sphere, she is more intense than is man. You will find cases of little girls three and four years old who have rubbed the vulva or the clitoris because of irritation from the urine, from uncleanness or from a hooded clitoris, and who have learned that such manipulation is pleasurable. As these little girls grow older they begin to experience a sort of orgasm, and I myself have seen children of six and

seven who unmistakably were experiencing a real orgasm. The older they grow the more confirmed the habit becomes—they are often precocious in their sexual development and very frequently complain of menstrual irregularities and dysmenorrhea. As they pass puberty they are apt to develop an effected superiority to male company, to be over "nice" and eventually to snub the boys entirely. Occasionally one of them goes to the opposite extremes and develops a sort of sickly sentimentality. The older they grow the less apt they are to be satisfied normally and the confirmed female masturbator finds it impossible under any circumstances to achieve normal satisfaction. Those of them who marry add to their troubles the physical and psychical irritations incident to undesired and unappreciated intercourse. Those of them who do not marry continue going from bad to worse sexually and eventually form our very "cattiest" type of ultra-feminists. They can converse for only a moment without saying something derogatory to mankind. At the same time the loss of self-respect which their habit entails makes them extremely sensitive and very "touchy." My experience has been that it is absolutely impossible to do anything with the confirmed adult female masturbator and the less energy wasted upon her the better. I do not say this in a condemnatory spirit but simply as a matter of practical common sense.

How shall you recognize the masturbator? The above mentioned description of Kelly's covers the field thoroughly and I would advise you all to read it. There are so many ways of masturbating that no one description applies to all of them. In fact, it is even possible for the female to masturbate mentally, and by the influence of thought only, to achieve an actual orgasm. I believe that most masturbators commence in childhood, if not in infancy, and consequently I feel that most careful attention should be given to little girls who display any irritation about the vulva. Many of these cases need common cleanliness. Many of them unquestionably need unhooding of the clitoris. Please do not understand that I am advocating indiscriminate so-called "official surgery." When needed, however, it is often remarkably efficient. When the child grows older and a confirmed habit is established, about the only way is to explain the case thoroughly to the mother. Perhaps she can present the subject to the child in an effective manner; if not, it is sometimes possible for the physician to talk with the child alone and produce a better effect. This, however, requires rare tact and a very keen understanding of adolescent mental processes. I do not recommend it to you unless you feel quite sure of yourself.

Every now and then some girl or young adult will come to you complaining of sexual irritation symptoms in whom you will find marked traces of a masturbation habit. What you should do with this case depends altogether upon your judgment of her mentality. If she seems to be intelligent and frank, it may be wise to carefully lead into the subject by asking about vulval irritation and whether such irritation causes very much scratching of the parts. Sometimes this question will lead her to tell you frankly of her habit. After she has confessed, the burden of doing something or nothing will be largely upon you. I know of no more difficult problem in all medicine. The girl who confesses the masturbation habit to you is not too far gone to be taught to enjoy normal intercourse, which would automatically



correct the abnormal habit. One must be very careful, however, in not allowing her to feel that you have a personal interest in the advice which you are giving. Now and then one of them tells you of a long-lasting engagement or of some man over whom she is very enthusiastic. In these cases, marriage is often curative, and she may be advised to terminate her engagement in that fashion. At the same time one's duty to the prospective husband and to society would compel him to go into the matter of proper sexual satisfaction quite carefully so as to be sure that she would achieve normal relations after marriage.

In other cases the only advice which I have been able to offer is general hygiene—cold baths, long walks, physical tire and mental occupation. Occasionally by keeping track of the case and having her report now and then you can exercise a decided deterrent influence, and by proper suggestion can assist her in breaking the habit. Often-times the confession of failure to abstain helps to restore her self-respect and affords you an opportunity for added psychotherapy. Parenthetically, I wish to state here that the loss of self-respect is, in my judgment, the very largest evil result of male masturbation and a very serious result of the habit in the female.

I feel less delicacy in speaking of the female perversions, for they generally occur in those of abnormal mentality only. I shall mention inversion only, by which term I refer to the turning in of her sex desire upon her own sex. The invert loves with a wealth of passion and a reckless abandon of all other interests, such as no normal love ever awoke. Many mysteries have their roots in a neurotic soil, fertilized by inverted tendencies and nurtured by a reciprocal affection. Here again the general rule, that women go to extremes in sexual matters more readily than do men, applies. The woman who has a homosexual love will be decidedly more jealous and decidedly more reckless in her conduct than she would with a normal love, or than any man would under any circumstances. The woman who has marked affection for other women, the woman who is quite womanly yet affects masculine women or the masculine type of woman who affects the "clinging vine" type may possibly be suspected. At least, you should be forewarned in their cases. Under all circumstances avoid them and do not let them realize your suspicion.

Every now and then someone asks me what, in my mind, is the solution of the entire sexual problem. It is so large and so important and often-times so terrible an individual problem that one is naturally interested in speculating upon the sexual future of the race. What are we justified in expecting as a solution of our race problem? Of course, no one can do aught but speculate.

For my part, I like to think of it somewhat in this way. The lower in the scale of life, the more fecund the species. The lower the scale of human life the more erotic the individual. I am reliably informed that natives low in the scale of development frequently practice intercourse five to ten times a day. I believe, as a rule, that the higher the mental development of the individual the less frequently does he have intercourse. Granting what was said at the commencement of this lecture about the profuse and promiscuous indulgence of early youth which gradually ceases until the old man cares little for intercourse as such, but more for mental associations;

and remembering the famous hypothesis that the individual passes through, in miniature, all the stages in the development of the race, I wonder if we are not justified in supposing that, as development proceeds, we will eventually cease to care very much about intercourse per se. I wonder if, several million years hence, the human race will not practice a sort of mental free love with the physical relation retained as a purely vegetative function. In other words, I wonder if we will not be practicing mental gratification or perhaps I had better say, I wonder if our gratification will not be in the exchange of ideas and in mental intercourse. In this way, I can see that the sex problem might eventually care for itself by mankind becoming indifferent to gross sexual satisfaction.

#### AGGRAVATION OF PRE-EXISTING DISEASE BY ACCIDENT AS A BASIS FOR COM- PENSATION UNDER WORKMEN'S COMPENSATION LAWS.\*

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Before taking up for consideration the topic which I have selected as the subject of the paper to be read this evening, it has occurred to me that possibly it might be of interest, particularly to the lawyers who are members of this association, to call attention briefly to some of the very interesting legal questions that have arisen in the course of the administration of the Workmen's compensation law. Those questions have assumed a very wide scope and have touched nearly every branch of law. Perhaps the question that has caused more litigation than any other is that relating to the jurisdiction of the commission in maritime matters.

Group 8 of Section 2 of the Workmen's compensation law designated as a hazardous occupation the operation within or without the state of vessels other than vessels of other states or countries used in interstate or foreign commerce, and Group 10 of the same section designated longshore work as a hazardous occupation. By the act, all employers engaged in conducting hazardous operations are required to secure the payment of compensation to their employees in one of the methods provided for by the act.

The Industrial Commission assuming to have jurisdiction to make awards in cases where the employees were engaged in maritime occupations, proceeded to entertain claims for compensation filed in such matters, and made a large number of awards in cases arising out of occupations of that character. Certain of the employers appealed from the decision of the Commission in those cases to the Appellate Division, Third Department, and later to the Court of Appeals of this state, alleging that the sections of our compensation law giving to the commission jurisdiction in admiralty matters were unconstitutional for the reason that exclusive jurisdiction in all maritime matters was vested by the Constitution of the United States in the Federal courts. But the Appellate Division of the Supreme Court and the Court of Appeals decided adversely to the claims of the employers. An appeal was thereafter taken from the Court of Appeals to the United States Supreme

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Court, and that court, on May 21st, 1917, by a divided court of five to four, held in the cases of *Southern Pacific Company vs. Jensen*, 244 U. S. 205, and *Clyde Steamship Company vs. Walker*, 244 U. S. 255, that the sections of the act referred to were unconstitutional and in conflict with the general maritime law of the United States.

The Industrial Commission had made a large number of awards in maritime cases. In some of those cases appeals had been taken and appeals were held pending the determination of the test cases. But in a large number of other cases no appeals whatever had been taken. On the contrary, in some of them the awards has been already paid, while in others awards were being paid periodically in accordance with the terms of the awards. As soon as the United States Supreme Court handed down its decision in the cases mentioned, the employers in those cases in which the awards had not been fully paid ceased making payment. The Industrial Commission cited such employers before it, and on a hearing ordered the employers to continue payments. The Commission were of the opinion that in cases where no appeal had been taken the employer had waived the constitutional objection, and the commission also held that the employers in such cases were estopped by reason of their conduct from raising the question after the employee had relied upon its acceptance of the award and had lost his rights in admiralty by such reliance. The employers, however, in those cases, again appealed from the decision of the Commission requiring them to continue payments, and the Appellate Division of the Supreme Court, Third Department, in the case of *Doey vs. Howland*, 182 App. Div. 152, and in other cases decided at the same time, held that the awards were absolutely void, and that therefore the Commission was without authority to enforce payment thereunder. The Commission appealed from the order of the Appellate Division to the Court of Appeals, and that court on June 4th, 1918, affirmed the order of the Appellate Division. While the *Doey* case and the other cases considered in connection therewith were on appeal to the Appellate Court, Congress amended the judicial code of the United States by adding to the clause "Saving to suitors in all cases the right of a common law remedy where the common law is competent to give it," as it occurs in two places in the United States Judicial Code, the clause "And to claimants the rights and remedies under the Workmen's compensation law of any State." The law by which this amendment was enacted became effective on October 6th, 1917.

The Commission thereupon proceeded to make awards in maritime cases under the jurisdiction conferred upon it by the amendment to the judicial code. Thereupon certain of the employers contended that Groups 8 and 10 of the Workmen's compensation law, being the groups that designated the operations of ships and longshore work as hazardous employments having been declared unconstitutional by the Supreme Court of the United States, were not made effective by the amendment to the judicial code, but that before such sections could have any validity it would be necessary that they should be re-enacted by the legislature of the state. This question went to the Appellate Division of the Supreme Court, Third Department, and was decided adversely to the contention of the employer. It was held by the Appellate Division in the case of *Cimmino vs. Clark*, 184 App. Div. 745, that as soon as the amendment

to the judicial code of the United States became effective the Commission had authority under Groups 8 and 10 of the Workmen's compensation law to make awards in admiralty cases, and that although those portions of the act had been held to be unconstitutional, the statute still remained on the statute books, and upon the removal of the bar to their validity, they were immediately given vitality and became effective.

The admiralty sections were again attacked on the ground that the amendment to the Federal judicial code was also unconstitutional. It has been contended that as the Supreme Court of the United States has decided that exclusive jurisdiction in admiralty matters is lodged with the Federal Government, that Congress could not by an amendment to the judicial code confer jurisdiction in such cases upon the states or any agencies of the state governments. This question arose in the case of *Stevens vs. Knickerbocker Ice Company* which was recently decided by the Court of Appeals, and in that case the award of the Commission was upheld. It is my understanding that it is the intention of the employer to seek to obtain a review by the United States Supreme Court of the decision of the Court of Appeals in that case. One other question arose in reference to the admiralty section. Longshore work was held to be of a maritime nature. The question then arose whether longshoremen engaged in work on the dock and not on the vessel came within admiralty jurisdiction of the United States, or were covered by the provision of the Workmen's compensation law. It was my opinion, and I so advised the Commission while acting as its counsel, that the test to determine whether a case fell within the admiralty jurisdiction in compensation matters was by ascertaining whether the contract of employment was entered into in relation to admiralty matters. In tort cases it is unquestionably the rule that the place where the tort occurs determines whether or not it falls within the jurisdiction of admiralty, but in contract cases the rule is that the nature of the contract determines whether or not it falls within the admiralty jurisdiction of the United States.

In personal injury cases for damages arising out of negligence, the rule of course was that the place where the injury occurred determined whether or not the case fell within the admiralty jurisdiction, because those were cases arising in tort. In compensation matters, however, tort is not the basis of an award, but the right to receive compensation arises out of the contract of employment, and it was my opinion that if the contract of employment related to admiralty matters, then admiralty had jurisdiction, and the Workmen's compensation law did not apply to such cases. There was, however, so much doubt about this question that the Commission decided to make awards and have the courts pass upon the question. Awards were accordingly made to longshoremen who were injured while on the dock, and from such awards appeals were taken to the Appellate Courts of the state, and it was decided that the nature of the work rather than the place where the accident occurred was decisive as to whether the case arose under admiralty or was covered by the Workmen's compensation law. This was so held in the case of *Keator vs. Rock Plaster Mfg. Co.*, 224 N. Y. 30.

The Attorney General of the state applied to the United States Supreme Court for a writ of certiorari to review the decision of the Court of Appeals, but



the petition was denied, and consequently the rule is now established that if an employee is injured while doing work that is maritime in its nature, it falls within the admiralty jurisdiction of the United States. This question, however, is not important at this time for the reason that the judicial code has since been amended. If the amendment to the judicial code should be held to be unconstitutional, then this question will again assume importance.

I might also call attention to the fact that very recently Judge Learned Hand decided in the case of "Steam Lighter Howell," that under the amendment to the judicial code, an employer who has complied with the provision of the Workmen's compensation law is relieved of all liability in admiralty. The Judge in that case held that under the provision of our Workmen's compensation law, compensation was the exclusive remedy afforded to an employee of an employer who had complied with the provision of the act, by securing the payment of compensation in one of the methods provided for by the act, and that as the judicial code saved to suitors the rights under the Workmen's compensation law, they were limited to such rights as they had under such law. If this decision is finally upheld by the higher courts, it will mean that in admiralty cases the only remedy of an injured employee against an employer who has complied with the statute will be such as he has under the Workmen's compensation law, and such employee will not have any remedy either in admiralty or in common law for injuries received, by reason of the negligence of their employer, in other words, they will be placed on a par with employees in other occupations covered by the Workmen's compensation law.

This review of the admiralty cases, which has been far more extensive than I had anticipated, indicates the variety of legal questions that have arisen under the act. There have been many others almost equally interesting questions which have challenged the attention of the Commission and of the courts.

In selecting a topic for discussion this evening, I have chosen a topic that seemed to me would be of interest to the medical and legal fraternities. It is not a topic that is any longer open to discussion, as it is my opinion that the law on the question is definitely settled, but I have felt that a concise statement of the growth and development of the law on the subject for consideration would prove of interest, and would also establish the great responsibility that rests upon members of the medical profession in connection with the administration of the Workmen's compensation law. The subject that I have selected for the paper of the evening is entitled "Aggravation of Pre-Existing Disease by Accident as a Basis for Compensation Under Workmen's Compensation Laws." It perhaps might be stated in the following language: Is the aggravation of a pre-existing disease by accident a compensable injury under the Workmen's compensation law? And on that topic I have prepared the following statement:

Very early in the administration of the Workmen's compensation law of this state as well as in other jurisdictions the question arose whether a workman who at the time he received an injury was suffering from a pre-existing disease or infirmity which was aggravated by the accident was entitled to receive compensation under the Workmen's compensation law, if it were established that but for such pre-existing disease or infirmity the accident would not

have disabled him. In many cases where the accident is trivial it has resulted in prolonged disability and not infrequently in death, due to the aggravation of the pre-existing diseased condition of the injured employee. The question thus presented was whether under such circumstances injured employees, or their dependents in case of death, were entitled to receive the benefits of the Workmen's compensation law, and further whether in determining the length of time for which the workman was entitled to compensation in case of injury not resulting in death his physical condition was to be taken into consideration.

It will readily be seen that the question is an extremely important one, and that its determination will in the course of time have far-reaching economic effects, the full extent of which at the present time has not been appreciated or realized. The principles of law involved in the determination of the question are now new. Practically the same question arose and was considered by the courts in actions for damages for personal injuries, and also in the trial of criminal cases.

In actions for damages for personal injuries caused by negligence the law is well established. The fact that the injured person is suffering from a pre-existing disease or infirmity is not a defense to the action but may be taken into consideration in determining the amount of damages to be awarded. This rule was recognized and approved by our Court of Appeals in the case of *McCahill vs. N. Y. Transportation Co.*, 201 N. Y. 221. In that case it appeared that the plaintiff's intestate, who was severely injured under circumstances justifying the finding that the defendant was guilty of and plaintiff's intestate free from negligence, died the second day thereafter of delirium tremens. The court in its opinion in the case said:

"The principle has become familiar in many phases that a negligent person is responsible for the direct effects of his acts, even if more serious, in cases of the sick and infirm as well as in those of healthy and robust people, and its application to the present case is not made less certain because the facts are somewhat unusual and the intestate's prior disorder of a discreditable character (*Tice vs. Munn*, 94 N. Y. 621; *Crank vs. Forty-second Street, M. & St. N. Ave. Ry. Co.*, 53 Hun, 425; *aff'd* 127 N. Y. 648; *Allison vs. C. & N. W. R. Co.*, 42 Iowa, 274; *Owens vs. K. C., S. J. & C. B. Ry. Co.*, 95 Mo., 169, 182). The principle is also true although less familiar, that one who has negligently forwarded a diseased condition and thereby hastened and prematurely caused death cannot escape responsibility even though the disease probably would have resulted in death at a later time without his agency. It is easily seen that the probability of later death from existing causes for which a defendant was not responsible would probably be an important element in fixing damages, but it is not a defense."

The rule in criminal cases is stated by Judge Vann in a concurring opinion which he wrote in the *McCahill* case. Judge Vann said:

"The elementary writers, citing many authorities, lay down the rule as follows: 'Though the person would have died from some other cause already operating, it is enough that the wound hastened the termination of life; as, for example, if he had already been mortally wounded by another. And if the one attacked was enfeebled by disease, and what was done would not have been mortal to a well person, still, whether the assaulting person knew his condition or not, if he did what was mortal to the other, the offense is committed' (2 *Bishop's Criminal Law*, Sec. 638).

"So, if the deceased were ill of a disease apparently mortal, and his death were hastened by injuries maliciously inflicted by the prisoner, this proof will support an indictment against him for murder, for an offender shall not apportion his own wrong' (3 *Greenleaf on Evidence*, Sec. 139).

"That the injury accelerated death is sufficient to cause

criminal responsibility. And the fact that the injury was such that, if the person injured had been a person of robust health, it would not have been attended with serious consequences, does not affect the criminal responsibility. Nor is it affected by the fact that the person inflicting the injury was ignorant of the physical condition of the person injured and of his inability to resist violence. And it is inadmissible in a prosecution for homicide to prove that the injury inflicted by the accused would not have caused death had it not been for the physical condition of the deceased. Nor is it material that the injuries inflicted merely hastened death" (Wharton on Homicide [3rd ed.], Sec. 34).

The Workmen's compensation law of Great Britain was enacted in 1897. Many of its features were copied into our statute and the decisions of the English courts were the only guide in the interpretation of our statute until we had built up a body of case law of our own, which, within the past few years, we have been doing at a very rapid rate.

The English courts laid down the rule that the test to be applied in regard to the matter under consideration was whether the accident accelerated an existing tendency to disease, or gave life to certain latent causes of disease in the injured workman's body, and, if so, the workman was entitled to receive compensation even though the accident would not have caused a disability or death in the case of a workman with a sound body, and this rule has been applied by the English courts to a great variety of cases.

Our statute defines "injury" and "personal injury" to mean only accidental injuries arising out of and in the course of employment, and such disease or infection as may naturally and unavoidably result therefrom.

In construing this statutory definition of "injury" it has been held in a multitude of cases under a variety of circumstances that a disease aggravated, accelerated, developed, or hastened by accident is compensable. In the case of *Banks vs. Adams Express Co.*, 221 N. Y. 606, an award was sustained which was made by the Commission on the finding that at the time of the accident the workman was suffering from typhoid fever in the incubation stage which became aggravated by a severe injury to his head caused by a fall from a wagon on which he was working, and through the consequent lowering of his resisting power caused the death of the employee.

In the case of *Van Keuren vs. Dwight, Divine & Sons*, 222 N. Y. 648, an award was sustained which was made by the Commission on a finding that at the time that the employee was injured he was suffering from tuberculosis, although such condition had not been known to him or any one else prior to the accident, and that the accident which he received, consisting of a blow on his neck and chest, caused an internal strain to his lung and aggravated a dormant tuberculosis so that it became acute and caused his death.

Perhaps the most frequent cases of aggravated disease that come before the Commission are those in which the employee is suffering from a defective heart, known or unknown, and incurs a heavy strain or other accident which causes sudden death or prolonged disability through heart failure or weakness. Awards in a number of such cases have been sustained by the courts. (*Uhl vs. Guarantee Construction Co.*, 174 A. D. 571; *Hackford vs. Veeder*, 176 A. D. 924; *Amesbury vs. Vacuum*, 178 A. D. 945; *Tucillo vs. Ward Baking Co.*, 180 A. D. 302.)

Another class of cases provoking great difficulties

are those where by reason of the accident an internal organ which was diseased or weak gives way under the strain of an accident, or a diseased condition of the organ is aggravated by the accident. Compensation has been awarded and sustained in cases of this character under the following among other circumstances: Where the lifting of a heavy barrel resulted in a cerebral hemorrhage, *Fowler vs. Risedorph*, 175 A. D. 224; where death was caused by delirium tremens produced by an accident, *Sullivan vs. Engineering Co.*, 173 A. D. 65; kidney disease following an accident, *Abbonato vs. Greenfield*, 175 A. D. 958; where a fall aggravated a cancer, *Blatt vs. Noble*, 176 A. D. 924; pleurisy resulting from an injury, *Greenberg vs. Canadian Mills Co.*, 178 A. D. 942; tuberculosis caused by inhaling coal gas by a person with weak lungs, *O'Dell vs. Adirondack*, 223 N. Y. 686; where a blow aggravated a tubercular condition, *Schenkler vs. Garford*, 183 A. D. 166; where a workman suffered a stroke of apoplexy and fell from a wall, *Santacroce vs. Sag Harbor*, 182 A. D. 412; and numerous other cases of which the above are a fair illustration of the varying conditions under which an award will be sustained where the injury consists of the aggravation of a pre-existing physical condition. The cases of hernia are very troublesome and very numerous. Awards have been sustained where strains or other accidents resulted in hernia or aggravated pre-existing conditions of hernia. (*Ulrich vs. Lenox Coat Co.*, 171 A. D. 958; *Mooney vs. Weber Piano Co.*, 172 A. D. 917; *Bella-fiore vs. Rome Bronze Works*, 181 A. D. 910.

It is necessary in all cases of this kind that there should be some evidence that the accident caused the disease or infection, or that it contributed to the aggravation of a pre-existing disease. If there is any evidence to support such a finding an award made by the Commission will not be disturbed by the courts as the Commission's finding on questions of fact are final and conclusive.

Our Court of Appeals has expressly refrained from expressing any opinion on the question whether the words "accidental injuries" used in our statute include internal injuries of an accidental nature caused by the usual and customary employment of an employee. In the case of *Alpert vs. Powers*, 223 N. Y. 97, the court said referring to the words "accidental injuries" in reference to this question that "it will be time enough to deal with this question when it arises."

A case which states the limitations to the rule under which an award may be made for the aggravation of a pre-existing condition and which in some respects does not seem to be altogether in harmony with the other cases is that of *Borgsted vs. Shults Bread Co.*, 180 A. D. 229. In that case the court said among others things, "The purpose of the Workmen's compensation law was not to abrogate the divine law that the 'sins of the father shall be visited upon the sons even to the third and fourth generation,' but to impose upon certain designated industries or the product of such industries the burdens of the accidents arising out of such employments. \* \* \*." The claimant received injuries while employed by the Shults Bread Co., which consisted of a spiral fracture of the right tibia above the ankle. Previous to the accident the claimant was afflicted with syphilis. The finding of the Commission was that "the injury to the ankle caused a lowering in Borgsted's resisting power and made him



less able to resist the progress of the disease of syphilis \* \* \*." In this way his previous diseased condition had become aggravated and there has been caused a complete permanent disability. \* \* \* Considering the existence of the disease of syphilis and the pre-existing involvement therein of his optic nerves the present condition of the claimant is the natural result of his injury. The injury to the claimant is total permanent disability, as the loss of vision in the eyes cannot be cured." In regard to this finding the court said:

"The finding that the accident occurred, and that it resulted in a spiral fracture of the right tibia just above the ankle, establishes the nature of the accident, which is one of very incidental importance, and ought not to result in anything more serious than a short disability. \* \* \*

"The statute defines 'injury' and 'personal injury' to mean 'only accidental injuries arising out of and in the course of employment and such disease or infection as may naturally and unavoidably result therefrom.' \* \* \* The insurance carrier is liable for the compensation due for the breaking of the tibia, and it may be that it would be liable to compensate the claimant for the disability, or partial disability, arising out of such injury during its continuance, though this should be prolonged beyond the ordinary period by reason of the pre-existing syphilitic condition of the claimant, but where, as here, it is found that the claimant was the victim of a disease, which all the witnesses agree was the cause of the loss of eyesight, and the most that is suggested is that the disease may have been aggravated by the accident, the case is not within the statute, in so far as it relates to the loss of eyesight. The disease, which the Commission finds existed prior to the accident, did not 'naturally and unavoidably result' from the accident; it was there with all the potentiality of destruction to the eyesight when this accident occurred, and if we assume that the disease was aggravated by the accident; that it developed more rapidly than would otherwise have been the case; still the disease or infection was not the result of the accident, and it is only resulting disease or infection which is provided for by the law."

This review of the authorities seems to establish conclusively that in compensation cases the rule is that a pre-existing disease which is aggravated or accelerated by an accident arising out of and in the course of the employment is an injury within the meaning of the compensation laws entitling the claimant, or in case of his death his dependents, to the benefits of the act.

There is this difference, however, between the rule in negligence cases and compensation cases; in the former the physical condition of the injured party may be taken into consideration in fixing the amount of damages which may be awarded him or his beneficiaries, while in the latter the physical condition is not taken into consideration in determining the amount of compensation to which he or his dependents may be entitled. In death cases under the compensation law there can be no reduction of the compensation, if it be found that the accident has as a fact accelerated a pre-existing disease, thereby causing death. If it be shown that the death of the employee was hastened by the accident, then his dependents are entitled to receive the compensation allowed by the law, notwithstanding that it should also be shown that the pre-existing disease would at some later date have caused death.

In disability cases under the compensation law where pre-existing disease or physical condition prolongs the disability it has been held in some states that compensation would be awarded only for the period which it can be determined a man in normal condition of life would have suffered from the injury received, and not for the increased period of disability due to the disease. This rule has been adopted in California, Connecticut, Massachusetts, and pos-

sibly some other states. In this state we have no case in which this point has been definitely decided. The nearest approach to a decision of the question is found in the case of *Borgsted vs. Shults Bread Co.* above referred to, in which the court used this language:

"The insurance Carrier is liable for the compensation due for the breaking of the tibia, and it may be that it would be liable to compensate the claimant for the disability, or partial disability, arising out of such injury during its continuance, though this should be prolonged beyond the ordinary period by reason of the pre-existing syphilitic condition of the claimant \* \* \*"

The economic principle underlying all compensation laws is that compensation should be given\* at the expense of the industry in which the employee was engaged to the employee or his dependents for the loss of earnings caused by an accident growing out of and in the course of his employment, and as stated in the case of *Waters vs. Taylor*, 218 N. Y. 248, "This is not only for his own benefit but for the benefit of the state which otherwise might be charged with his support." These laws are passed under the police powers of the state and are designed to make the industries of the state in which the accident occurred stand the expense of taking care of the injured employee and his dependents when the accident arises out of and in the course of the employment, which expense under our constitutional amendment authorizing the enactment of workmen's compensation laws is held "to be a proper charge in the cost of operating the business of the employer."

Generally speaking the workmen's compensation laws have worked admirably, and these laws are being accepted by the overwhelming sentiment of the public as well as that of the employers engaged in industrial enterprises. It is doubtful if any large percentage of employers would care to have the laws repealed. They are now recognized as being necessary under modern industrial conditions. And yet, their full economic effect has by no means been developed. Under the doctrine that has been discussed it must be obvious that in the course of time it will become more and more difficult for the aged or those suffering from any physical infirmity to find employment in the hazardous occupations. The Workmen's Compensation law has been in effect in this state only five years and during most of this time we have had abnormal labor conditions due to the world war. Before the outbreak of the war it had become quite common for employers engaged in hazardous employments to require a physical examination of every applicant for employment before accepting the applicant. This practice will undoubtedly be adopted very generally when normal labor conditions again prevail in order to avoid the increased cost of operation of business due to the compensation which would have to be paid such employees in the event that they were to receive trivial injuries which on account of their physical condition might result in heavy claims for compensation.

Again, under our law the widow of a deceased employee whose death is caused by an accident arising out of and in the course of his employment is entitled to receive 30 per cent of the average annual wages of her deceased husband during her lifetime, except in the event that she should remarry, in which case she is entitled to receive 2 years' compensation in a lump sum. Under the rule we have been considering this evening if an aged employer who happened to have a young wife is killed by an accident which has aggravated some pre-existing disease with which he was suffering and from

which he would have died in a short time regardless of the accident, his widow becomes entitled to 30 per cent of the average annual wages of her deceased husband during her lifetime, with the provision for a lump sum payment in case of her remarriage. It is conceivable, therefore, that a case may arise in which an employee 65 years of age, or perhaps older, who is suffering from a fatal disease, receives a slight accident which if it had happened to a person in normal condition would have resulted at most in a short period of disability, but in his case causes the death of the employee, owing to his physical condition, and yet the widow although she may be young, perhaps not more than 25 or 30 years of age, thereupon becomes entitled to compensation for life as above stated. The period for which she is entitled to receive compensation is not determined by the age of the employee, neither is the age of the employee taken in any way into consideration in determining the compensation to which she is entitled, but she, under the law, is entitled to 30 per cent of his wages during her lifetime regardless of the age or the physical condition of her deceased husband.

Our law in this respect is more liberal than the laws of most of the states. In nearly all the other states a widow's award is generally limited either in amount or for a certain fixed period of time. Theoretically it would seem to be a just rule to determine the period for which the widow is entitled to compensation by the probabilities of the life of her deceased husband except for the principle upon which compensation laws are framed—to prevent the dependents of deceased employees becoming charges upon the state. Whatever the theory of the law may be, I think it must be evident that the result of our law making such liberal provisions for the dependents of deceased employees will be, in the course of years, that aged and physically infirm employees will be denied employment, and then the problem will be presented to the people of providing in some other way for that class of employees and their dependents. This is one of the many new industrial problems that will challenge our attention in the days of reconstruction upon which we are now entering. It would be useless to predict at this time the manner in which that problem or many others are to be solved. The most we can do at this time is to suggest the problem and to call attention to a situation which will undoubtedly arise within the next few years.

71 Broadway.

#### ABSTRACT OF DISCUSSION.

Judge Oppenheimer:—In all about 10,000 cases have been tried and hundreds of doctors have testified before me, and I can testify that one of the severest accidents that can befall either plaintiff or defendant is the retention of a dishonest or incompetent physician. There are a great many dishonest physicians without doubt. For instance, I had a physician testify in one case that he had examined a man's foot on January 1st and found that the foot was double its normal size and the man was suffering excruciating agonies. Another physician for the other side testified that he had examined the foot on the same date and found it absolutely normal.

I think physicians should be compelled to keep a medical history of every case. I believe that in eighty cases out of one hundred the physician has no records and testifies from memory.

O. W. Ehrhorn, Esq.:—A man might be a very distinguished physician and yet be unfamiliar with the English language, though I think that a man practicing medicine in this country should be acquainted with the English language. A few years ago I met such a man in Russia who was on his way to an international convention of physicians and surgeons in this country. He knew very little English and wanted to engage in conversation with me in order to improve his Eng-

lish, and yet he was the leading medical man in Russia. If he had attempted to testify on the witness stand I am sure you would have needed an interpreter.

Mr. Zinnser:—I want to protest against what has been said about physicians making different statements on the witness stand. Physicians are no more likely to testify falsely than other witnesses. In every court one hears witnesses make statements that are just opposite to one another.

Dr. George Dow Scott:—Many cases that I have seen in court have warranted the belief that if judges knew a little more about law and medical conditions it would have been better for everybody concerned. What has been said about physicians is sometimes true. The doctor's testimony depends often upon which side he is testifying and whether the plaintiff has enough money to pay him.

Now we have many such cases and in compensation work the testimony depends a great deal on the financial status of the patient and the insurance company. As for the doctors, if they find that the patient is able to pay a large fee they may convince him that his condition is one that will last a long time. I saw one case in which a man injured his hand slightly. The physician opened it up and charged him \$150. In that case the insurance company discovered the actual conditions and did not pay the damages.

Mr. Josephson:—I remember an experience in connection with the Industrial Commission in a case in which there was no doctor to testify except the doctor put up by the insurance company. The man was about 70 years of age and the Company agreed to settle by paying an award of \$65. A doctor from the New York Health Department, found him suffering from consumption and the man had fallen on his chest and it was thought that was the cause of his disease. The case was reopened. It was finally decided that the man was suffering from disease and that the disease had been produced by the accident and it ended by his getting a compensation award of \$1,100. We have had a great deal of trouble in getting doctors when they are not paid by the workingman to testify as to the real condition.

Mr. Ehrhorn:—I think one of the most interesting and valuable questions brought out in the paper was in regard to future conditions arising from the economic standpoint. We should like to have had this discussed.

Mr. Bonyne:—One of the men who discussed the paper cited an instance of a man who fell on his chest, either aggravating a dormant tuberculosis or causing a tuberculosis. That case was similar to the one to which I called attention in the paper. In a man in normal condition the fall on the chest would not have resulted in more than a short period of disability, but probably if the man had a dormant condition the fall was responsible for lighting it up and in that case the question arises whether the insurance company is liable for the disability due to the tuberculosis or whether it is only liable for the disability caused by the injury itself. The courts say the man is entitled to compensation for the aggravation of a pre-existing disability.

The importance of the testimony of the physician cannot be exaggerated. If a man has been injured and dies within a year and the employer or insurance company has not had a doctor examine him, they would have to rely upon the medical testimony his widow would be able to bring out; there would be no way to refute that the accident did not produce the result that it was claimed to have produced. Now in the case of the man with tuberculosis it is quite possible that a fall could aggravate the dormant condition and if there was no testimony on the other side the award would be made. That illustrates how important it is that the testimony of the physician should always be honest. The medical profession is charged with a very great responsibility, and while I think the larger part of the medical profession tries to perform its duty faithfully and honestly there are dishonest men, and this law puts it within the power of the dishonest doctor to make a large claim. The medical profession should see that the medical man who is licensed to practice medicine should be honorable and reliable and if he is not he should be put out of the profession, just as the legal profession sees to it that men who are a disgrace to that profession are put out of its ranks. There is a possibility that within the next few years we may have health insurance and that much heavier responsibilities will be placed upon the medical profession and it will be incumbent upon the medical profession to see that its ranks are kept clear of men who for money or other considerations would give false testimony. Unless this is done these laws will be an engine of great injustice, and it was for this reason that I thought this paper would be interesting and instructive to the medical profession.



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## Riggs' a Venereal Disease.

The dictionaries define a venereal disease as one due to or propagated by sexual intercourse.

It seems reasonable to suppose that Riggs' disease is propagated more through sexual intercourse than in any other way, because of the character of the kissing indulged in by many amorous persons during such intercourse.

Considerable light has been thrown on this unsavory subject by a writer in a 1915 issue of the *Alienist and Neurologist*, who discusses among other things this matter of kissing during sexual intercourse.

The kiss of ordinary social intercourse, though known to be unsanitary, is a transient, innocent ritual, in no wise comparable to the type of kiss under discussion. The kiss of courting no doubt at times approaches in kind that of sexual intercourse, but where unduly passionate it is pretty sure to become part of a completed *liaison*.

It is herewith declared with conviction that Riggs' disease, practically speaking, is a venereal disease.

## Bloody Reckonings.

If there is anything more thoroughly established than the fact that alcohol is a narcotic we do not know what it is. And no fact has been more thoroughly pounded into our devoted heads. We believe it as we believe the multiplication table.

Why, then, should any one doubt that the prohibition of this narcotic will result in the use of other narcotics on the part of millions never before addicted to anything but alcohol?

What do the race riots signify? Washington, we understand, had been bone dry for two months before the breaking out of the riots. It is fairly obvious that prohibition bore some relationship to these riots. What are the possible relationships?

It may be that under prohibition in Washington more alcohol has been consumed than was formerly the case. It may be that the law is effective, but that there has been an increased consumption of narcotics other than alcohol. Or it may be that neither alcohol nor other narcotic drugs are procurable at all, with resultant nervous and mental demoralization. Whatever the answer, prohibition must be taken into account.

It is of course true that after the colossal demonstration furnished by the war of the sanctioned use of "force without stint" as a mode of settling matters that ought to be settled, there is a tendency in the air to arrange everything by direct action. This sort of thing would be favored by psycho-neurotic disturbances due to prohibition.

But worse may be expected to follow in the wake of an enforced prohibition amendment. Accustom the people to laws like prohibition and you will have gone a long way in the direction of making possible the acceptance of organic changes as radical, for example, as the abolishment of the institution of private property.

Strange, indeed, that while we fear most of all that spectre which gibbers at us from Russia, we proceed madly to do things that invite the spectre to visit us.

Our fanatics have good intentions, but their ministrations have an odd likeness to those of beasts of prey. It is an uncanny experience to be torn to pieces by voracious lovers.

The Russians are said to be a kindly sort of people. During the pogroms of the old régime it is said that the murderers of the Jews would sometimes say to them: "We are sorry, little brothers; we love you, but must kill you."

It seems to us that our prohibitionists are kindly people, in much the same way as the Russian gentry aforesaid.

And they are so naive as not to realize their frightfulness.

Tobacco, tea and coffee next!

## Health and the Movies.

A bad feature of the movies is that "run down" people whom we are constantly advising as to their need of fresh air spend the time available for out-of-door exercise in a vitiated atmosphere. Many of these people are also disseminators of infectious disease, so that their movie habits are not bad for themselves alone. They may be said to contribute much to the atmosphere of the movies in a very literal sense.

It is a question whether the assuagement of emotional starvation which the movies effect, together with other obvious advantages, offsets the hygienic harm done to a large class.

Perhaps it will be argued that psychical benefits neutralize physical harm. But how can psychical gratification and contentment be said to offset anemia and grave infectious disease?

Our conclusion is that the movies are all right for those who are healthy enough to withstand their unhygienic features and their bad art while satisfying their emotional hunger and low tastes, but that the half-sick need fresh air more than they need the psychic pabulum that goes with "How Hearts are Broken" and "The Wildcat of Paris."

We hear some cynic asking of what account the health and lives of such habitués are anyway. Perhaps not much in themselves, but their bad health may become communicable to others, including the cynic.

We serve a community interest whenever we persuade the diseased and the half-sick to abjure the movies, at the same time that we promote these individuals' health.

#### The Tarpeian Rock for Traitors.

The unqualified opposition to all compulsory health insurance legislation which is gathering strength in the allied professions all over the state bodes well for the future. The chief utility of the tri-professional league will become apparent *after* the passage of a health insurance law. An unbroken front will then be necessary to convince the authorities of the impossibility of dragooning the allied professions into degrading service.

That a health insurance law will be passed there can be no doubt. It is as certain as prohibition. It simply remains for the allied professions to make it unworkable through passive resistance.

Were there a shadow of justification for a compulsory health insurance law an uncompromising attitude would be immoral. But no compulsory law of the sort can be passed that will not be vicious in principle and in practice as well as economically absurd. The effrontery of the proponents of compulsory health insurance is so colossal that it must be met in only one way. Any other course would be dishonorable.

#### What Can Physicians Do to Reduce the High Cost of Living?

This query can be answered with confidence and emphasis. The physician is the first line of defense in both war and peace. He is the one who keeps the capacity of the worker up to normal and can achieve precisely in proportion as he is encouraged to help in essential directions. If not encouraged he must proclaim his eagerness to aid and also make clear where and how he can contribute most to the economic results. During the pressure of circumstances, such as prevail at the present, we as conservators of health, hence of earning capacity, hence of adequate supplies to meet all reasonable demands, should seize the occasion to insist on radical departures from archaic medieval customs and restrictions. Hereafter, in order to make good, to justify confidence and to secure the next step demanded for advance, we must see to it that the public learns where we stand in the scheme of economics. Our rôle is to raise the coefficient of efficiency in each and every citizen and to maintain it insofar as we are permitted.

During all this talk of "personal rights" it is our duty to demand consideration for *personal obligations*. As we see it every responsible citizen is obligated to keep his or her equipment, capabilities, up to that measure of efficiency necessary to fulfill all obligations to the commonwealth. We can do this; we can add to present averages to an almost limitless extent; just so soon as the public can be made to appreciate the facts. Among the facts are that any human being, at whatsoever age, condition of life, habits, preconceptions, etc., can be raised to a higher plane of capability by expert revision of conduct. This has been shown convincingly in the findings of the draft, and these subjects are the choicest specimens of young manhood. Here, one-third (34.19%) were rejected. Also the evidence is that 50% to 60% of men between thirty-one and forty-six years of age could not have passed for military service. "An exam-

ination of the causes for rejection, in reference to origin and manner of development shows that many could have easily been prevented, readily corrected or promptly cured.

"In fact, we are so far beneath our ability to increase the vigor, efficiency and happiness of the race as to appear to be still within the shadow of the dark ages." (J. Howard Beard, M.D., of the University of Illinois, *Scientific Monthly*, July, 1919.)

What is found in this group, to our deep mortification, but clearly within oft repeated medical prophecy, would be exhibited in even more significant directions and degrees among those of mature age, or elaborated, hence more valuable mentalities. Shall we do anything about it—or shall we rest content with the same outworn methods of waiting till the fire is well under way before we, the fire fighters, or the destruction limiters, are permitted to take the obviously needed precautions or preparations? Yes, we shall be forced to this idiotic spininess and futility until that much becoddled and be-praised "public" come out of its depths of prejudice or apathy or stupidity and are permitted to do our duty. The crux of any form of democracy or government by, for and of, the people, is to fulfill obligations to the commonwealth as well as enjoy the "privilege of self-determination"—which may include contributing to, not only the outrageous high cost of living (so few laborers being available), but to other indefensible prodigalities and wastefulnesses of energizing.

It is not so much what endowments a citizen may have which counts for him or his community, as what he saves and puts to the best uses.

The prime human asset is not latent capability but elaborated and conserved capability. The cost of living depends on the average productivity of the workers. This productivity rests squarely on the make up, the physical and equally on the mental or emotional status (poise) of the individual unit or the collective unity, on the gross earning power.

The first line of defense of a commonwealth, as has been said, is her experts in sanitation, in human conservation, reconstruction and the chief of these are found among the medical profession. They are competent in proportion as they are encouraged to act and to keep in action; as they enjoy the coöperation and appreciation of the community.

There can be no blinking these facts. They can be demonstrated beyond peradventure and to the lasting satisfaction of all.

Has mankind reached that stage of mental, moral and physical enlightenment which shall enable the mass to appreciate these inexorable truths?

If so, let them demonstrate the affirmative without delay or we shall be forced to resign ourselves to the same old disappointments which prevailed in those "Dark Ages" referred to. Members of the medical profession are eager to serve in accord with their training and experience. They need the coöperation of the newspapers or small progress can be made. In our domain rests the crux of reducing the H. C. L. by raising the coefficient of efficiency in the laborer. Shall we be permitted to do our bit? How much help will the press extend to us?

#### The Whitman Problem.

The recent Whitman celebration recalls the old speculations as to the great poet's sexual psychology. His curious emphasis upon "manly love," which he regarded as destined to be a leading virtue of democratic nations, and the source of a new chivalry, irresistably recalls



the sexual inversion of the Periclean age. He dwells upon the physical charms of the men whom he loves for all the world like the Greeks who made a cult of pæderasty.

Since Whitman disavowed as "damnable," to John Addington Symonds, any morbid inferences from his doctrine, we can only conclude, at the most, that he may have been one of those strange persons who, though actually inverts, do not realize the whole meaning of their traits and instincts. Yet he wrote "Calamus." And what would one infer from the following:

"For an athletic is enamored of me—and I of him,  
But toward him there is something fierce and terrible  
in me, eligible to burst forth,  
I dare not tell it in words—not even in these songs."  
To a Western boy he says:  
"If you be not silently selected by lovers, and do not  
silently seek lovers,  
Of what use is it that you seek to become élève\* of  
mine."

We meet in very many of Whitman's lines a passionate glow, a warmth of emotional tone, toward his "robust lovers," which Symonds declares to be beyond anything to which the modern world is used in the celebration of the love of friends. "Boy of responding kisses," runs one of these lines.

Finally, he says:

"Here my last words, and the most baffling,  
Here the frailest leaves of me, and yet my strongest-  
lasting,  
Here I shade down and hide my thoughts—I do not  
expose them,  
And yet they expose me more than all my other  
poems."

## Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

### The Great Social Value of the Bully.

The patient was a burly chap, giving the impression habitually that he was bent upon intimidating everyone, even in ordinary intercourse. "A typical bully," the doctor thought, as he noted down the salient points of the case.

The man was an official, engaged in work consisting not so much in the use of force as in the suggestion of force.

The bully would have been useless as a soldier, since real courage and not bluff is needed in the military game. His function was simply to intimidate people.

Strange to say, the bully was suffering from various phobias. He presented a most interesting fear complex. When he was most brutal in his official capacity he was most sick at heart with terror.

His career might have ended ridiculously at any time had he encountered a free soul, but those with whom he dealt were a suppressed and a discreet lot of cattle anyway. Just a paradoxical phase of modern life, after all.

This man had been a sickly and timid boy. As he grew older he set himself to the building up of his physique, and was successful in this. The timidity which disguised itself during his boyhood never changed, and its concealment, because of its incongruity, became more burdensome in adult life. The sickly boy had his way in the home, where there were no brothers, and in school substituted cunning for courage in order

to make adjustments. Arrived at manhood, he found it natural and convenient to take up work calling for bullying qualities. For him, this was the direction of least resistance, for bluff had become a necessary part of his psychology and the chance for brutal actions somehow compensated for his incapacity. Cruelty and brutality are inevitably developed in such a character by fear.

Yet, the doctor reflected, how could society function without its bullies? They have been needed. The fact that cowards of this type have been employed in large numbers proves the need. What they have put over has been considered necessary by a curious civilization. Only the bully class could be utilized for particular and indispensable purposes. In certain circumstances the presence of a bully class in the community is matter of congratulation, if we are logical.

Should the bully be relieved of his fear, along Freudian lines, thought the doctor. Were this to be effected he would cease, of course, to be a bully. Would the doctor be performing a patriotic act and not be abusing his professional privileges in curing the bully?

The doctor's decision was against a cure, and the bully has performed distinguished service since, albeit racked with terror.

Who shall say that the doctor's decision was not an ethical one?

## Correspondence

### The Necessity for Action.

To the Editor of THE MEDICAL TIMES:

If prostitutes in the United States who do no productive work, are receiving \$164,250,000, or (as many people think) three times that much, of the national income each year, is it not worth while to cut off that waste?

If at least 15 per cent of the insane, who in the State of New York cost the taxpayers one-sixth of the total taxes to support, are insane because they acquired syphilis, would it not be sensible to stop the spread of syphilis?

Yes, this is propaganda—of a somewhat different kind than you usually receive, however. The war has shown that it is not so difficult to control prostitution, gonorrhea and syphilis as has sometimes been thought. By propaganda and action we advanced a decade in the fight against these diseases and their spreaders. If people knew the facts; if they realized the price paid for allowing commercialized prostitution to exist, ACTION WOULD GO ON.

Admitting this, your attention is called to three pamphlets which deserve your consideration.

One of these pamphlets, "Standard Statistics," still in proof sheet form, has been prepared to give the facts, and not theories or sentimental half-truths. The proof sheets of this pamphlet are not yet complete, this Association being the first to recognize their many shortcomings. They represent, however, a first step towards publishing statistics in this field of social hygiene which will be truly standard.

The American Social Hygiene Association is going to do what it can in the future, as in the past, to make the facts known; to continue the fight. Can you add any facts to those we have printed?

WILLIAM H. ZINSSER,  
Director, Department of Public Information.

### Epididymitis and Orchitis in Cerebro-Spinal Fever.

Epididymitis and orchitis are complications of cerebro-spinal fever, and the meningococcus has been obtained by puncture of the inflamed organ, but it is rarely mentioned in the textbooks.

It appears that both meningococci and para-meningococci may be associated with orchitis and epididymitis.

It is generally considered that the epididymitis and orchitis are septicemic in origin. In about 10 per cent. of the cases the lesion is bilateral. Orchitis or epididymitis is almost always transient, subsiding without suppuration and not being followed by atrophy. —(Brit. Med. Jour.)

\*Élève [pupil].

## Diagnosis and Treatment

### Active Immunization of Infants Against Diphtheria.

Zingher calls attention to the need of some practical efficient method of active immunization to protect the child in an adult population against this disease. Most of the cases and most of the deaths occur from one to five years of age, so that the method must be applied early in life. He gives some interesting statistics on the mortality and morbidity of the disease which emphasize the necessity for some better method of combating it than that which we have previously had. During the past five years, 1913 to 1917 inclusive, there has been a yearly average of 14,613 cases, with 1,258 deaths, in New York City. In 1910, in the registration area of the United States, there were 11,512 deaths, which was nearly double the number caused by either measles or scarlet fever. In a study of these and other more extensive figures that he gives, he points out that in spite of the use of small prophylactic doses of antitoxin the total number of cases has not been reduced to any extent, nor have the present methods of isolating and treating carriers accomplished much when viewed on a large scale. There have been a number of recent investigations on the subject of natural and active immunity, and the Schick test furnishes a valuable clinical test for determining the immunity.

From a prolonged experience covering a number of years, Zingher has drawn some important conclusions: (1) That the negative Schick reaction, when done with proper technic and a suitable toxin, gives definite information as to the presence of immunity to diphtheria. Not only is this true, but (2) he states that a negative Schick test is of value in children over one and a half to two years of age in noting the development of a natural immunity which seems to be permanent. (3) In children below six to nine months of age the immunity, as shown by a negative Schick reaction, is only temporary and derived from the mother through the placental circulation. In breast-fed infants the immunity is derived through the breast milk, but all of these infants sooner or later become susceptible to the disease. If the mother has no immunity of her own, the child is susceptible at birth. If the mother is immune, the child becomes susceptible from six to nine months after birth, but a child may retain this maternal immunity even up to its eighteenth month. (4) An increasing proportion of children gradually develop a natural immunity and in adult life from 85 to 90 and even 95 per cent have become immune.

Zingher therefore believes that by actively immunizing children under eighteen months and only those over eighteen months who give a positive Schick reaction, the entire child population could be rendered immune to the disease during the period of greatest susceptibility and greatest danger from death. By the use of diphtheria toxin-antitoxin mixtures, susceptible individuals may be lastingly immunized, or, at any rate, the immunity has persisted for three years, and in a small group for over four years. Zingher believes that the character of the immunity so produced may be either an active immunity similar to that following other forms of vaccination, or that it is the earlier development of the natural immunity that would have gradually developed in later years, or a combination of these two. This active immunity, which is produced by toxin-antitoxin injections, develops slowly, and is not suitable in controlling a sudden, acute outbreak of the disease. Under such circumstances it is recommended that a combination of active and passive immunization be made in all those giving a positive Schick reaction, and, after the end of four or five weeks, to retest the patient and to give three more doses of the toxin-antitoxin mixtures at weekly intervals in all children showing a positive reaction.

In young infants, the toxin-antitoxin reaction produces very little local or constitutional disturbance, and this fact makes the immunization in early life very desirable. In later life there may be rather severe local and constitutional symptoms consisting of redness, swelling and tenderness of the arms, and slight fever lasting a day or two. This is most liable to occur in those showing pseudoreactions, and is due to the action of the bacillus protein in the mixture. The toxin-antitoxin mixtures must be made in a laboratory and tested in the guinea-pig for its potency. It should be slightly toxic and should represent about 85 per cent of an L+ for each unit of antitoxin, and should be supplied by municipal and State health departments free of charge.

Zingher believes that infants below twelve and, if possible, below eighteen months of age should be immunized with three doses, of 1.0 c.c. each of this mixture, and it should be given, if possible, at the time of the Schick test, irrespective of the

result the infant may show at the time of immunization. The injections may be given either subcutaneously in the arm or below the angle of the scapula. The Schick test may be omitted, if desired, under eighteen months of age, as all those children should be immunized anyway, and it lessens the labor of the physician, although it offers interesting data where it is possible to apply it. This method should be used in all the larger groups of children, such as are seen in milk stations, day nurseries, and children's dispensaries and orphan asylums, and it is of particular value in those who are constantly exposed to infection, such as doctors, nurses, hospital orderlies and patients in contagious disease hospitals, but only those giving positive reactions need to be actively immunized.—(Ruhrah in *Prog. Med.*, Vol. 1, 1919.)

### Treatment of Malaria.

Major G. Paiseau, of the French army, has this to say about the treatment of malaria:

Quinine treatment.—In the treatment of malaria the points to be considered are the method of administration of quinine, the time of administration, and the dosage.

As to the method of administration, quinine may be given intravenously, intramuscularly, and by the mouth.

The method of intravenous injection is generally regarded as a procedure only for exceptional cases. Its dangers appear to have been exaggerated, and the technique recommended by Jeanselme and Manaud, consisting in the slow injection by a serum syringe of 1 g. of quinin bichlorhydrate dissolved in 100 g. of saline, appears capable of completely removing such dangers. Carnot and de Kerdrel have shown that the intravenous method is the method of choice in dangerous malignant attacks. On the other hand, this method is not superior to the others in its sterilizing power, doubtless on account of the rapidity of elimination of quinin introduced directly into the circulation. The indications for its use are, therefore, special and precise.

The general use of intramuscular injections has brought to light a certain number of difficulties. Even when it does not produce abscesses, which have, in fact, been fairly frequent and often severe, the caustic action of the quinin is painful. Although, however, this method should not be employed as a routine, nevertheless it is indicated as the only one practicable for patients with gastric irritability who are the subjects of malignant attacks.

Many writers give preference to administration by the mouth. Reference must be made to the opinion held by Marchoux as to the value of giving the least soluble forms of quinin, their efficiency being the greater because they are eliminated more slowly; the sulphate, and, above all, the alkaloid itself, being more active than the other salts. According to Marchoux, chronic malaria must be treated by oral administration.

The effective dose of quinin was generally fixed at 1 g. per day for constant treatment. A majority, however, of the medical officers advise a dose of 2 g., especially in infections due to the parasite of malignant tertian fever: some even advocate a dose of 3 g. for two or three days.

The time of administration of quinin appears to have lost much of the importance imputed to it at a period when it was sought to make the absorption of the drug coincide with the presence in the peripheral circulation of the young parasites which are alone susceptible to it. This end cannot be attained in those cases in which the fever is continuous from the onset, as the successive generations of parasites are too numerous. The same is true at the stage when the paroxysms become so irregular that it is difficult in practice to administer the drug at the proper moment. The methods employed vary according as the case is one of primary fever, or of attacks at the so-called secondary stage of malaria.

At the onset, when the aim is to sterilize the patients by preventing the appearance of the resistant forms, the gametes, it has been usual to adopt the classic method of administering quinin in large and continued doses. Mention should, however, be made of the technique employed by Abrami, who prefers to administer the quinin in very large doses at the febrile periods only, in order to destroy in succession the generations of parasites passing into the circulation.

In secondary malaria comparatively little use appears to have been made of the method of discontinuous dosage, based on the weekly periodicity of the recurrences. The method chiefly adopted has been that advocated by Ravaut by which two days' treatment with 1 or 2 g. of quinin a day is alternated with two days of injections with strong doses of cacodylate. Castaigne and Paillard give 2 g. of quinin a day for three days each week.



These methods of treatment have the disadvantage of working in the dark. For this reason the method advocated by Marchoux is of the greatest interest. It is based on the observation that the parasites pass into the blood-stream two or three days before the rigor, the delay being due to the need for their multiplication to an extent sufficient to provoke the rigor.

With regular examination of the blood at intervals of three or four days it is possible to administer the quinin at the right moment and to destroy the generations of parasites in succession as they appear in the circulation. Not only can the recurrence of rigors be anticipated, but the patients can also be rendered sterile with a minimal expenditure of quinin. Marchoux considers that the destruction of four generations of parasites would suffice to sterilize the system.

**Accessory treatment.**—In association with quinin, iron and arsenic are the standard drugs for the treatment of malaria. Medication with arsenic has been specially studied, and many writers recommend its systematic use. In France the combined arsenic-quinin treatment advocated by Ravaut, Réniac, and de Kerdrel is specially popular. On two successive days 0.20 to 0.30 g. of arrhénal are injected, followed on the next two days by 2 g. of quinin chlorhydrate by the mouth. This treatment gives excellent results, and has in all cases a remarkable effect on the general health.

Carnot has made a general study of arsenical medication in malaria. He avoids the use of atoxyl and gives preference to injections of arsenobenzol-Billon. The lesions of the suprarenal glands noted in malaria justify the use of adrenalin intravenously or subcutaneously, particularly during the rigors and in weak and unstrung subjects, and especially at the commencement of infection. Ravaut, who finds frequency evidence of suprarenal insufficiency in secondary malaria, agrees with Perrin and Edelmann in advising the use of adrenalin at this stage.

From the aggregate of the studies published on the therapeutics of malaria there emerges the conclusion that no method of treatment is capable of producing within a short period permanent sterilization of the patient.

Three methods of treatment deserve mention by reason of their originality or of the results obtained:

1. Abrami treats the complications of primary malaria by quinin in very large doses—3 g. of quinin daily, preferably by injection and in two doses, until the temperature no longer exceeds 100.4° F.; the daily dose is then diminished to 2 g. by injection, and is continued until the second day after the temperature has reached the normal. The originality of the method consists in the fact that the quinin is not given during the period of apyrexia, but that the sterilization is effected by successive doses at the onset of a paroxysm.

2. Ravaut and Carnot have recommended treatment with arsenic. Ravaut alternates the injection of 2 g. of quinin a day for two days with the injection of 0.20 to 0.30 g. of arrhénal for a further two days. This course is followed for one month, and if necessary renewed for three weeks longer after an interval of ten days. Carnot gives six injections of arsenobenzol-Billon in a month at the rate of one dose of 0.30 to 0.45 g. every five days, and then gives a protective dose of 0.45 g. once a fortnight, then once a month.

3. Marchoux makes a practice of examining thick blood-films twice a week; in the case of malignant tertian fever and during active stages on alternate days. If the result is positive 1 g. of the alkaloid is given at once. It is extremely rare for an attack to develop between two examinations. These examinations are carried out in a dispensary at which the patients attend regularly. By this method it is possible to employ them on active work during the whole course of treatment.—(*Lancet*, May 3, 1919.)

#### Indications for Operation in Diabetes.

The indications for surgical intervention in diabetes mellitus are discussed by Blum, *Paris Med.*, 1919, i., 341-43, who remarks that this question may be one of the most difficult problems which the practitioner has to confront. Apart from urgent cases in which an operation is imperative, such as strangulated hernia or perforative appendicitis, hesitation may arise as to whether an operation is justifiable or as to the period at which it should be performed. The difficulties are all the greater as diabetes and the surgical affection have a reciprocal influence upon one another and a vicious circle is created. Should the operation be carried out at once to remove the lesion and at the same time the causes which have an unfavorable action on the diabetes? Or, on the other hand,

should an attempt be made to render the urine free from sugar, or at least to reduce the glycosuria so as to cause an improvement in the lesion and thus render the conditions more favorable for operation?

Much may be said in defence of either step. Numerous instances have occurred of surgical affections in diabetes which have healed spontaneously after disappearance of sugar from the urine, while, on the other hand, it often happens that after successful operation the diabetes takes a mild course and shows an improvement characterized by diminution of glycosuria and disappearance of the acetoneuria. The difficulty of deciding in these cases is increased by the fact that a surgical operation exposes the diabetes patient to great danger, which is chiefly connected with the anæsthetic and operative shock. Moreover, the preparation of the patient constitutes a psychical trauma, which may act very unfavorably on the disease.

As regards the anæsthetic, ether is to be preferred to chloroform, though cases of diabetic coma following the use of ether are by no means rare. Spinal and local anesthesia present certain advantages, but these are counterbalanced by the great likelihood of shock ensuing. Blum is of opinion that in mild cases of diabetes characterized by a slight degree of glycosuria and the absence of acetone bodies abstinence is indicated, and an attempt should be made to cure the glycosuria. On the other hand, in severe cases characterized by a high amount of glycosuria and the presence of acidosis operation should be performed as quickly as possible. The same applies to diabetes complicated by nephritis.—(*Lancet*, May 31, 1919.)

#### The Infecting Agent in Influenza.

Yamanouchi, Sakakami, and Iwashima say that during the past winter influenza caused the loss of many lives in Japan. According to official statistics, up to the end of January, 1919, there were nearly 30,000,000 cases, of which 170,000 proved fatal. Inasmuch as 52 doctors and nurses offered themselves as subjects for experiment, the authors were able to solve some important questions relating to this infectious disease. The experiments and results now recorded were made between Dec. 1st, 1918, and the end of March, 1919.

##### Experiments.

1. An emulsion of the sputa from 43 influenza patients was made in Ringer's solution. This emulsion was injected into the nose and throat of 12 healthy persons.

2. A filtrate (by Berkefeld filter) of the same emulsion was injected into the nose and throat of 12 other healthy persons.

The results of these experiments are very significant; among the subjects treated were six persons who had already had influenza, and all six showed no symptoms of illness. But all of the other 18 subjects, both those who had received the emulsion and those who had received only the filtrate, were attacked by the disease, after an incubation of two or three days. Their fever was sometimes slight (37.5° C.), sometimes very severe (39° C. or more). The subsequent symptoms were headache, sore-throat, lumbago, cough, and the like.

3. A filtrate of blood of influenza patients was injected into the nose and throat of 6 more healthy persons. The results were precisely the same as in the previous experiments.

4. We inoculated subcutaneously 4 healthy persons with the filtrate of the sputa emulsion and 4 others with a filtrate of the blood of influenza patients. They all, with the exception of one who had previously had influenza, developed the disease after two or three days' incubation.

5. A pure culture of Pfeiffer's bacillus and a mixed preparation of the pure Pfeiffer, along with pneumococci, streptococci, staphylococci, diplococci, and many other like microbes common in the sputa of influenza patients, were injected into the throat and nose of 14 healthy people who had not had influenza. There were no symptoms of illness following these injections.

##### Summary.

1. The germ of influenza cannot be removed by filtering (filterable virus).
2. The germs can infect through the mucous membrane and also by inoculation.
3. The germs can be found in the sputum and the blood of influenza patients.
4. The known bacilli, such as Pfeiffer's bacillus, pneumococci, and some diplococci are not the cause of influenza.
5. We observed experimentally that all people who have previously had influenza or received the sputa emulsion or its filtrate are immune to the disease.—(*Lancet*, No. 4997, 1919.)

## The Physician's Library

**The Health Officer.** By Frank Overton, M.D., Sanitary Supervisor, N. Y. State Dept. of Health and Willard J. Denno, M.D., Medical Director of the Standard Oil Company. Cloth, 512 pages, with 51 illustrations; \$4.50 net. Philadelphia and London: W. B. Saunders Company; 1919.

At last we have a book which clearly and efficiently tells the health officer what his duties are, exactly what is expected of him, and how he should functionate. Not only does it lay down all the usual data on matters which come to the attention of the health officer, but very many of the small details, which have been overlooked or have been regarded as unimportant by authors of other books, are utilized in this volume. By a series of well-planned diagrams, the method of transmission of various communicable diseases is made clear, and by a host of clear and distinct illustrations the reader is instructed in epidemiology and other subjects, to his decided advantage.

The book is the most practical work for health officers we have yet seen, and it is a pleasure to recommend it to all those who are charged with the protection of the public health. The high standing of the authors is sufficient guarantee of the authoritativeness of their remarks, but the subject matter needs no form of apology.

**Geriatrics.** By Malford W. Thewlis, M.D. Cloth, 250 pages. St. Louis: C. V. Mosby Co.; 1919.

It is only within recent years that geriatrics has become recognized as demanding particular attention on the part of the profession. The author has done very much to bring about such recognition, and it is natural, consequently, that he would present the subject of diseases of old age in a careful and conscientious manner. The subjects are well presented and the book will go far toward establishing the science of geriatrics as an independent specialty of medicine.

**The Don Quixote of Psychiatry.** By Victor Robinson. Cloth, 339 pages. New York: Historico Medical Press, 206 Broadway; 1919.

Dr. S. V. Clevenger is the subject of a book written in Victor Robinson's admirable style. The life history of that clever Chicago physician is delightfully portrayed, with a wealth of intimate personalities that make it most interesting reading. Anything that Victor Robinson writes is bound to be clever and he has even shown this ability in producing the biography of a physician whom many of our readers will remember with interest.

**Urology.** By Victor Cox Pedersen, M.D., of St. Mark's Hospital. Cloth, 991 pages, illustrated, \$7.00. Philadelphia: Lea & Febiger; 1919.

Despite the fact that there are several large textbooks devoted to urology, Dr. Pedersen has added one which will stand out in the literature of this subject. His wide experience as a urologist has enabled him to draw from his splendid personal knowledge of the various subjects at his command and, as a result, he has produced a book which, while it follows many of the usual lines, presents the subject matter in the most attractive form.

One noticeable feature is that he devotes much space to symptomatology, which takes in various subjects which have heretofore been utilized under special headings.

He, unlike many other authors, has devoted no space to syphilis as a separate disease, handling it only when it is complicated with a part of the genito-urinary system. The book is strong in its diagnostic features and is very practical in the technic of treatment.

All in all, Pedersen's work will stand out as a thoroughly useful and very high-grade volume.

**Cheerio.** By Harold M. Hays, Late Major, M. C., U. S. Army. New York: Alfred A. Knopf; 1919.

Those physicians—and they are many—who know Hays appreciate the fact that any book on a popular subject which he may turn out will be sketchy and entertaining. They will not, therefore, be disappointed in reading the story of his experiences in France while attached to the British forces. In his pleasant-running style, Hays tells the story of six months with the R. A. M. C. and shows all the difficulties and disagreeable features of life in the trenches, as well as the more pleasant side. He found

the British officers princes and formed a real affection for the British Tommy.

The book is a cheerful one and will help in passing a very pleasant hour, because Hays is an apostle of optimism and looks at the world through bright glasses.

**Report on Medical and Surgical Developments of the War.** By Lt.-Com. William C. Bainbridge, U. S. N., R. F. U. S. Naval Bulletin, January, 1919.

The entire issue of this volume of the Naval Bulletin is given over to Dr. Bainbridge's very thorough and exhaustive report on the development of the war from a medical and surgical standpoint. It shows the result of his observations on the Western Front and in England for seven months, as well as certain of his findings made while in Germany during 1915. It is a splendid presentation of the wonderful advances made by the Allied medical officers, and it likewise demonstrates that the Medical Department of the U. S. Navy took a very prominent part in the work in question. Bainbridge in his own thorough manner has brought out all the salient features and has added much to the Navy's already excellent record.

**Gynoplastic Technology.** By Arnold Sturmdorf, M.D., Clinical Professor of Gynecology, N. Y. Polyclinic. Cloth, 334 pages; \$5.00. Philadelphia: F. A. Davis Company; 1919.

This book illustrates the fact that the technological principles of gynecological surgery as perfected by Simms, Emmett, and other master minds, no longer rule in the world of surgery. It demonstrates that there has been marked advance in this branch of surgical procedure. The various operations that come to the attention of gynecologists are very carefully expounded, aided by many excellent illustrations. To the operating surgeon this book will prove of decided assistance.

**Symptoms of Visceral Disease.** By Francis M. Pottenger, M.D., Professor of Diseases of the Chest, Univ. of Southern California. Cloth, 328 pages; \$4.00. St. Louis: C. V. Mosby Co.; 1919.

The object of the author in presenting this book is to interpret in terms of visceral neurology the symptoms which are found in clinical observations of visceral disease. He shows how the pathologic changes in one organ affect other organs and the body as a whole through the medium of the visceral nerves. He believes that clinicians should recognize the importance of the vegetative nervous system, as well as the physiologists, because it holds the secret of visceral activity. By means of this book greater interest in clinical observation should be aroused.

**The Soul in Suffering.** By Robert S. Carroll, M.D. Cloth, 241 pages. New York: The MacMillan Co.; 1919.

The souls of those who have been in pain have been laid bare before this keen medical observer. Through his sympathy and skill he has been able to touch the heartstrings of his patients and they have in turn revealed to him thoughts born of suffering, which have enabled him to portray clearly and beautifully those underlying ideas which oftentimes only come out as a result of pain.

**Speech Disorders.** By Maykirk Scripture and Eugene Jackson. Cloth, 236 pages; \$2.00. Philadelphia: F. A. Davis Company; 1919.

This is a manual for the correction of disorders of speech and consists of fifty lessons, properly illustrated. The authors, both of whom are well known in this phase of the work, have prepared a series of lessons which, if followed, cannot help but aid in the correction of impeded speech.

**The Realities of Modern Science.** By John Mills. Cloth, 327 pages. New York: The MacMillan Co.; 1919.

During the past few decades there have been enormous advances in every branch of science, and this book gives some idea of the realization of the dream of the alchemists. They thought of transmutation, but none of them lived to see it a fact. Today this is a natural process in the case of radio-active substances. The isolation of the electron has changed the entire course of events. The author sets forth the results that have followed the discovery of the electron, and he shows that alchemy is really something actual.